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DEFINITION AND CLASSIFICATION OF FISHING GEAR CATEGORIES

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

DEFINITION AND CLASSIFICATION OF FISHING GEAR CATEGORIES

by

C. Nédélec
Fisheries Technology Service
Fishery Industries Division

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome 1982

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PREPARATION OF THIS DOCUMENT

The origin of this document may be found in the Interim Report on the International Standard Statistical Classification on Fishing Gear, prepared in 1971 (FAO Fisheries Circular No.280) by the FAO Fisheries Department with the assistance of specialists and especially of Prof.A. von Brandt, Federal Republic of Germany, and Prof. A.I. Treshev, USSR.

Initially intended for use by fishery statisticians only, it closely follows the latest version of the International Standard Statistical Classification on Fishing Gear (ISSFG), currently adopted by the Coordinating Working Party (CWP) on Atlantic Fishery Statistics. As recommended by the CWP, the scope of this document has been enlarged in order to make it useful not only to staff involved in the preparation of fishery statistics, but also to all concerned with fishing gear identification and classification, in particular in fisheries administrations, research and development institutions, training centres, fishing technology services and extension service units.

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ABSTRACT

The document provides definitions of fishing gear of all kinds, grouped by categories, following the classification in accordance with the internationally recognized standard (ISSFG) recommended by the CWP and FAO. These definitions and classification are valid on a world-wide basis for both inland waters and sea fisheries, as well as for small-, medium- and large-scale fisheries. Brief descriptions, complemented by simple illustrations and selected examples of gear drawings, are intended to provide sufficient information, even to non specialists, for a proper identification and classification of all types of fishing gear. It is expected that the document will be useful, though at various levels and at least for reference purposes, to fisheries statisticians, economists, administrators, biologists, technologists, teachers, extension workers, etc.

CONTENTS

	Page
INTRODUCTION	1
DESCRIPTION OF THE MAJOR CATEGORIES OF GEAR	1
1. SURROUNDING NETS	1
1.1 Surrounding Nets with Purse Lines (Purse Seines)	2
1.2 Surrounding Nets without Purse Lines (Lampara Nets)	2
2. SEINE NETS	2
2.1 Beach Seines	3
2.2 Boat Seines	3
3. TRAWL NETS	4
3.1 Bottom Trawls	4
3.1.1 Beam trawls	4
3.1.2 Bottom otter trawls	5
3.3.3 Bottom pair trawls	5
3.2 Midwater Trawls	5
3.2.1 Midwater otter trawls	6
3.2.2 Midwater pair trawls	6
3.3 Otter Twin Trawls	7
4. DREDGES	7
4.1 Boat Dredges	7
4.2 Hand Dredges	7
5. LIFT NETS	8
5.1 Portable Lift Nets	8
5.2 Boat Operated Lift Nets	8
5.3 Shore Operated Lift Nets	8
6. FALLING GEAR	9
6.1 Cast Nets	9
.....	
6.9 Falling Gear (Not Specified)	9
7. GILLNETS AND ENTANGLING NETS	9
7.1 Set Gillnets (Anchored)	9
7.2 Drifting Gillnets (Driftnets)	10
7.3 Encircling Gillnets	10
7.4 Fixed Gillnets (on Stakes)	10
7.5 Trammel Nets	11
7.6 Combined Gillnets - Trammel Nets	11
8. TRAPS	12
8.1 Stationary Uncovered Pound Nets	12
8.2 Pots	12

	Page
8.3 Fyke Nets	13
8.4 Stow Nets	13
8.5 Barriers, Fences, Weirs, Corrals, etc.	14
8.6 Aerial Traps	14
9. HOOKS AND LINES	14
9.1 Handlines and Pole-Lines (Hand Operated)	15
9.2 Handlines and Pole-Lines (Mechanized)	15
9.3 Set Longlines	16
9.4 Drifting Longlines	16
9.5 Longlines (Not Specified)	17
9.6 Trolling Lines	17
10. GRAPPLING AND WOUNDING	17
11. HARVESTING GEAR	17
11.1 Pumps	18
11.2 Mechanized Dredges	18
.....	
20. MISCELLANEOUS	18
APPENDIX 1 International Standard Statistical Classification of Fishing Gear (ISSCFG)(29 July 1980)	21
APPENDIX 2 Examples of Drawings of Fishing Gear	25
APPENDIX 3 Sources of Illustrations and Graphic Documentation (Bibliographic References)	51

INTRODUCTION

The International Standard Statistical Classification of Fishing Gear, drawn up in 1971 by FAO with the assistance of distinguished specialists, such as Professors A. von Brandt and A.I. Treshev, is not used by most of the international organizations connected with fisheries. Initially designed to improve fishery statistics, this classification has also been found very useful for fisheries technology and the training of fishermen. It has been used in particular for reference in works dealing with the theory and construction of gear and for the preparation of specialized catalogues on artisanal and industrial fishing methods.

On many occasions the use of this classification of fishing gear for fishery statistics has proven to be of prime importance, if exploitation conditions are to be assessed accurately; but it has also been realized that the use of the classification is often restricted, or rendered difficult, by the lack of technical knowledge by administrators and the staffs of fisheries and statistical offices responsible for identifying the gear categories to which a country's catches and landings relate.

These issues have led us to prepare this document, in which the staff responsible for statistics will find concise but sufficiently precise descriptions, complete with simplified overall illustrations, which should enable them to identify the various categories of gear used in the different fisheries sectors (artisanal, semi-industrial and industrial), either in marine or inland waters. Furthermore, this document will be useful as basic reference and for general information to all specialists, technicians and workers concerned with fisheries administration, control and surveillance, training, research and extension service.

As regards the illustrations, in case of doubt or for more details, reference can be made to the FAO fishing gear catalogues and particularly the FAO Catalogue of Small-Scale Fishing Gear[1/], prepared on the basis of the existing International Standard Classification. The sequence and numbering of the gear categories correspond to the numerical code used in the International Standard Statistical Classification of Fishing Gear (ISSCFG)[2/], as adopted during the 10th Session of the Coordinating Working Party on Atlantic Fishery Statistics, Madrid, 22-29 July 1980 (see FAO Fisheries Report No. 242)[2/], except for one or two minor exceptions which could be made the subject of later amendments to the Classification.

DESCRIPTION OF THE MAJOR CATEGORIES OF GEAR

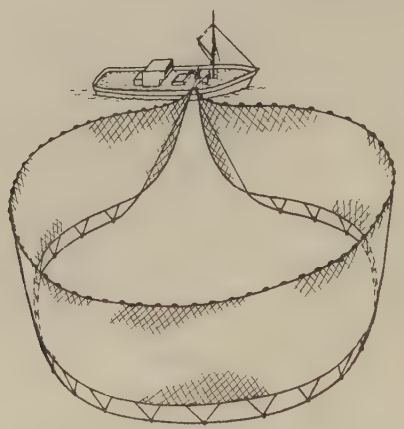
1. SURROUNDING NETS

These nets catch the fish by surrounding them both from the sides and from underneath, thus preventing them from escaping in deep waters by diving downwards. Apart from a few exceptions, they are surface nets in which the floatline is supported by numerous floats.

1/ Published by Fishing News Books, Long Garden Walk, Farnham, Surrey, England

2/ See Appendix 1, p. 21

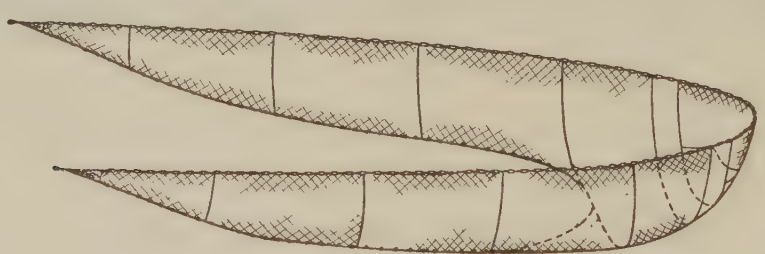
1.1 Surrounding Nets with Purse Lines (Purse Seines)



The nets in this category are purse seines characterized by the use of a purse line at the bottom of the net. The purse line enables the net to be closed like a purse and thus retain all the fish caught.

The purse seines, which may be very large, are operated by one or two boats. The most usual case is a purse seine operated by a single boat, with or without an auxiliary skiff.

1.2 Surrounding Nets without Purse Lines (Lampara Nets)



The lampara net is the type most representative of this category. Its particular design, with the central bunt in the form of a spoon and two lateral wings, makes it possible to retain the shoal of fish when the two wings are hauled up at the same time.

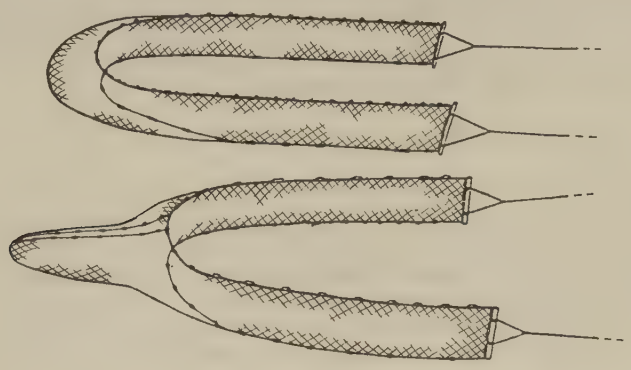
Lampara nets are generally operated by a single boat, most often of small tonnage.

2. SEINE NETS

These nets, which are usually set from a boat, can be operated either from the shore (beach seines) or from the boat itself (e.g., Danish seines).

The manner of capture is to surround an area of water with a very long net, with or without a bag at the centre. The net is usually operated by two ropes fixed to its ends, used both for hauling it in and for herding the fish.

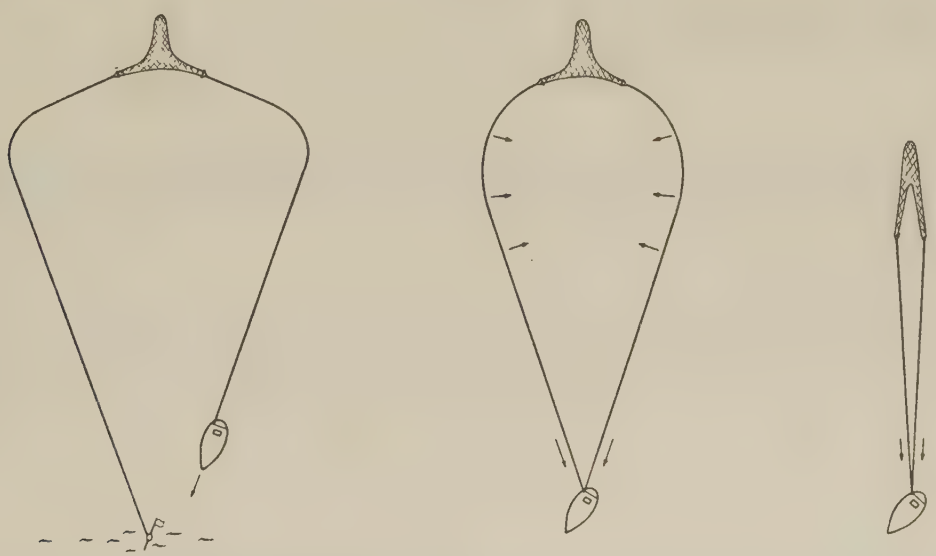
2.1 Beach Seines



This category comprises the seines operated from land, which are generally used in shallow waters, near the shore; the bottom and surface act as natural barriers which prevent the fish from escaping from the area enclosed by the net.

A distinction is made between beach seines with a bag and beach seines without a bag; the latter do have, however, a central part with smaller meshes and more slack, which retains the fish caught.

2.2 Boat Seines



The type most representative of this category is the Danish seine. The design of these nets, consisting of two wings, a body and a bag, is similar in many ways to that of trawls.

Operated from a boat, they are generally used on the bottom, where they are hauled by two ropes, usually very long, set in the water so as to ensure that as many fish as possible are driven or herded towards the opening of the net.

3. TRAWL NETS

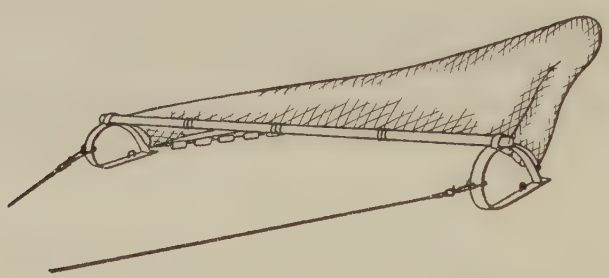
These are towed nets consisting of a cone-shaped body, closed by a bag or codend and extended at the opening by wings. They can be towed by one or two boats and, according to the type, are used on the bottom or in midwater (pelagic). In certain cases, as in trawling for shrimp or flatfish, the trawler can be specially rigged with outriggers to tow two (or even four) trawls at the same time (double rigging).

3.1 Bottom Trawls

These trawls are designed and rigged to work near the bottom. According to the type used, one may distinguish: low opening trawls, especially adapted to the capture of demersal species, such as beam trawls and shrimp, sole or nephrops trawls; and high-opening trawls, suitable mainly for the capture of semi-demersal or pelagic species.

In bottom trawls, the lower edge of the net opening is normally protected by a thick groundrope ballasted with chain sinkers and often covered with rubber discs, bobbins, etc.

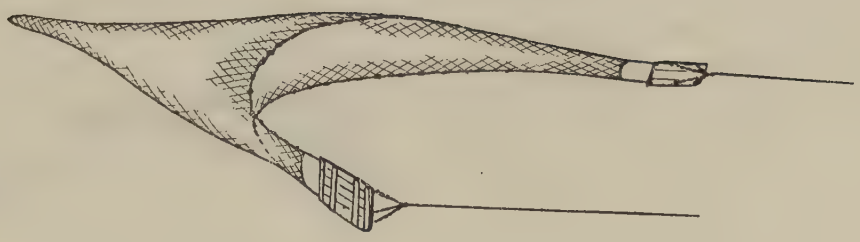
3.1.1 Beam trawls



In these trawls, the horizontal opening of the net is provided by a beam, made of wood or metal, which may be 10 m long or more. Beam trawls are used mainly for flatfish and shrimp fishing[1/].

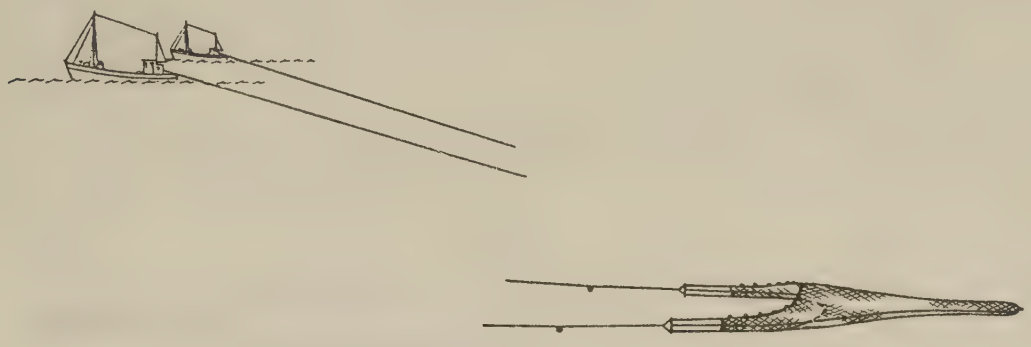
1/ Both beam trawls and bottom otter trawls can be used either with single rig, i.e., operated generally from the stern or more rarely from the side of the vessel, or with a double rig, i.e., two gears towed simultaneously

3.1.2 Bottom otter trawls



These are trawls towed by a single boat; their horizontal opening is obtained by otter boards, relatively heavy and equipped with a steel sole designed for a marked contact with the ground[1/].

3.1.3 Bottom pair trawls



These trawls are towed by two boats at the same time, the distance between the boats ensuring the horizontal opening of the net.

3.2 Midwater Trawls

These trawls, usually much larger than the bottom trawls, are designed and rigged to work in midwater, including surface water. Their front net sections are very often made with very large meshes or ropes, which herd the fish schools towards the net aft sections. The fishing depth is usually controlled by means of a net sounder (netsonde). They may be towed by one or two boats.

1/ Both beam trawls and bottom otter trawls can be used either with single rig, i.e., operated generally from the stern or more rarely from the side of the vessel, or with a double rig, i.e., two gears towed simultaneously

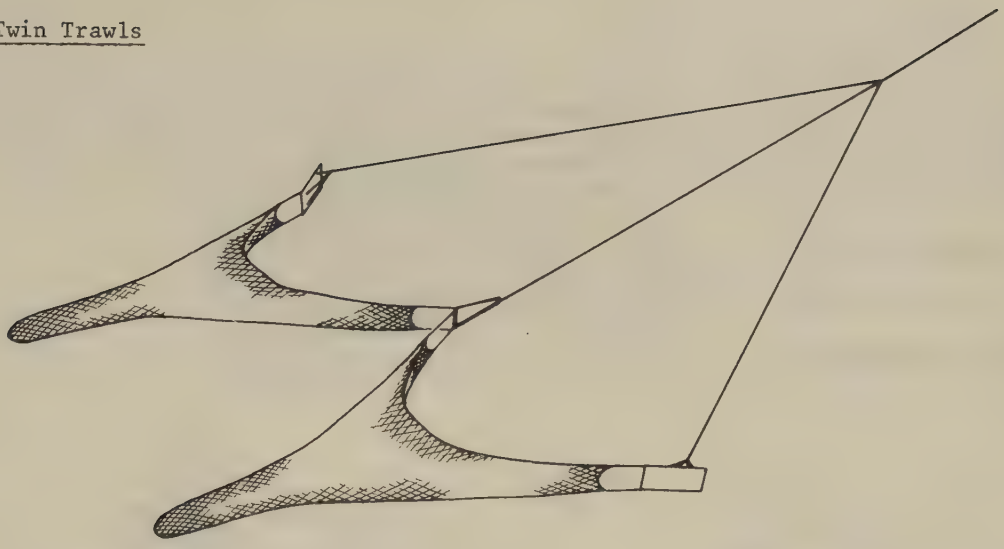
3.2.1 Midwater otter trawls

These trawls are towed by a single boat. The horizontal opening of the net is controlled by otter boards, usually of a hydrodynamic shape, and which normally do not touch the ground.

3.2.2 Midwater pair trawls

Towed by two boats, thus ensuring the horizontal opening of the net, these nets are designed and rigged to work in midwater. Surface trawls are also included in this category.

3.3 Otter Twin Trawls

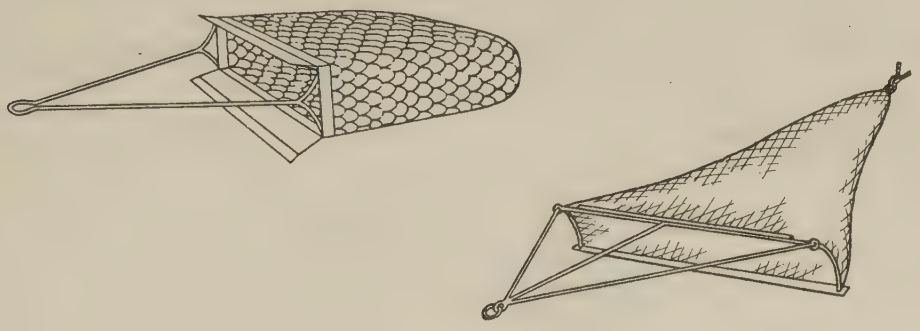


This rather peculiar gear comprises two identical trawl nets ('twin') working together, opened horizontally by a single pair of otter boards. Their inner wings are attached to a sledge towed simultaneously with the otter boards from a common crowfoot. They are generally used for catching shrimp.

4. DREDGES

These are gear dragged along the bottom, usually to collect molluscs such as mussels, oysters, scallops, clams, etc. The shellfish are held in a sort of bag or sieve which allows the water, sand or mud to run out.

4.1 Boat Dredges



These dredges are of varying weight and size, but are usually fairly heavy, equipped with or without diving boards.

4.2 Hand Dredges

These are small, light dredges, operated by hand in shallow waters, from the shore or from a boat.

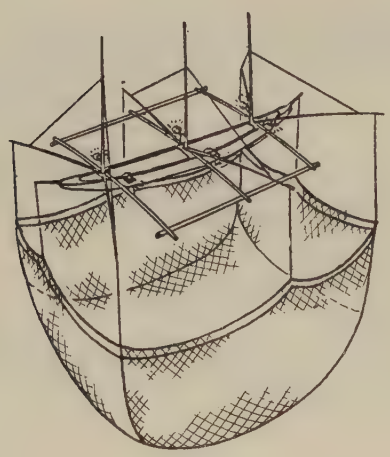
5. LIFT NETS

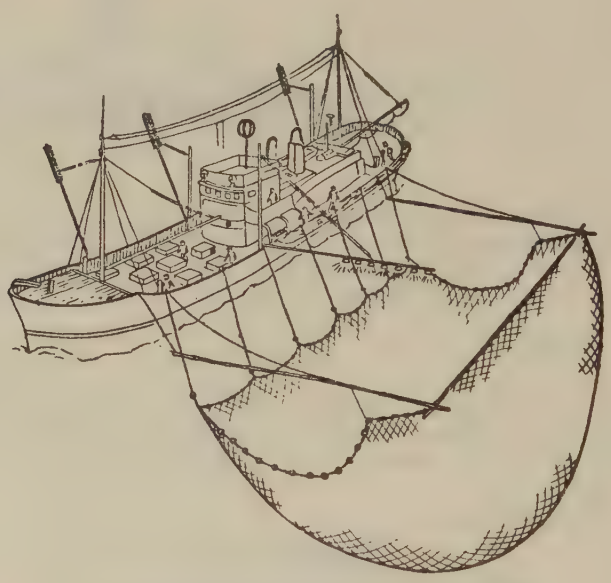
The fish, which may be attracted by light or bait, are captured in nets consisting of a horizontal netting panel or a bag shaped like a parallelepiped, pyramid or cone with the opening facing upwards. After being submerged at the required depth, the nets are lifted or hauled out of the water, by hand or mechanically, from the shore or from a boat. The fish which are above the net are retained in it when the water runs away.

5.1 Portable Lift Nets

Small nets operated by hand, with no fixed installation.

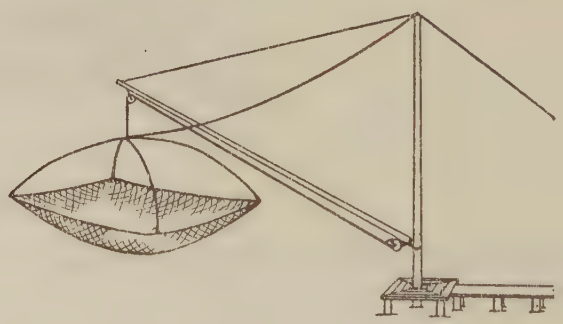
5.2 Boat-Operated Lift Nets





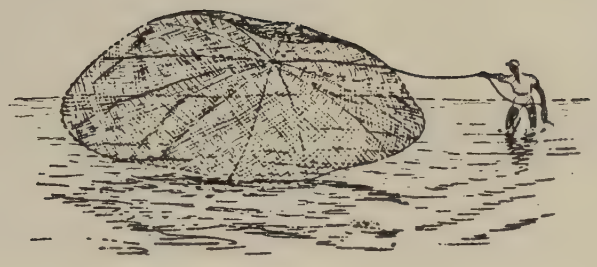
This group comprises the bag nets ('basnig') and the blanket nets, operated from one or more boats.

5.3 Shore-Operated Lift Nets



These lift nets are usually operated from stationary installations situated along the shore, the lifting system sometimes being mechanized.

6. FALLING GEAR



6.1 Cast Nets

These nets, cast from the shore or from a boat, catch the fish by falling and closing in on them. Their use is usually restricted to shallow waters.

.....

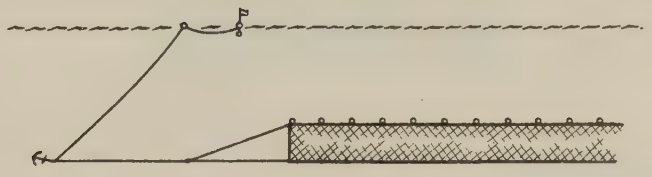
6.9 Falling Gear (Not Specified)

Cover pots and lantern nets, generally hand-operated in very shallow waters, are included in particular in this category.

7. GILLNETS AND ENTANGLING NETS

With this type of gear, the fish are gilled, entangled or enmeshed in the netting, which may be either single (gillnets) or triple (trammelnets). Several types of nets may be combined in one gear (for example, trammelnet combined with gillnet). These nets can be used either alone or, as is more usual, in large numbers placed in file ('fleets' of nets). According to their design, ballasting and buoyance, these nets may be used to fish on the surface, in midwater or on the bottom.

7.1 Set Gillnets (Anchored)

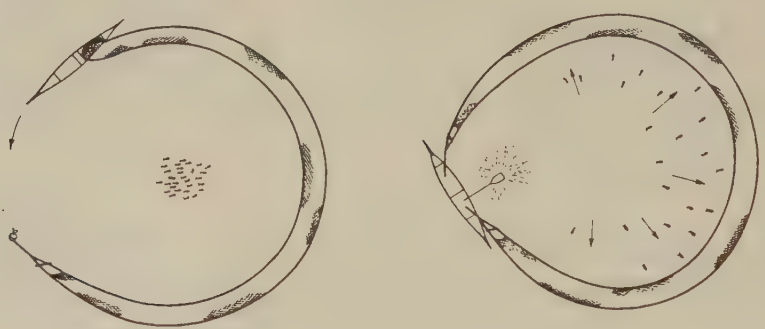


These nets are fixed to the bottom, or at a certain distance above it, by means of anchors or ballast sufficiently heavy to neutralize the buoyancy of the floats.

7.2 Drifting Gillnets (Driftnets)

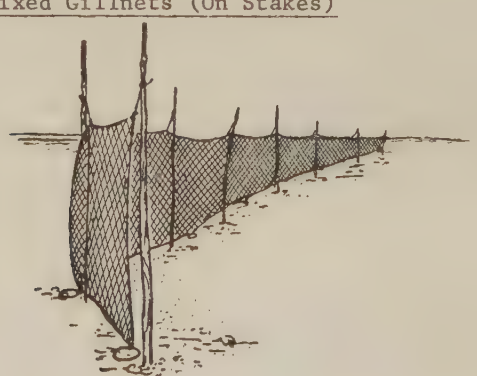
Kept on the surface, or a certain distance below it, by numerous floats, these nets drift freely with the current, separately or, more often, with the boat to which they are attached.

7.3 Encircling Gillnets



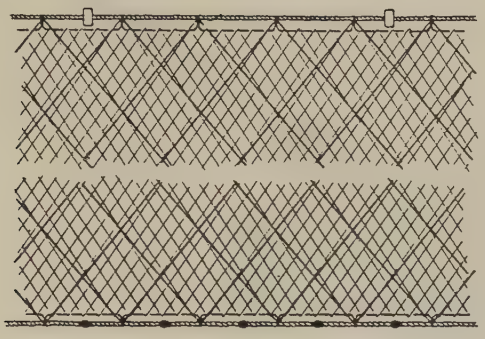
This gear is generally used in shallow water with the floatline remaining at the surface. After the fish have been encircled by the net, noise or other means are used to force them to gill or entangle themselves in the netting surrounding them.

7.4 Fixed Gillnets (On Stakes)



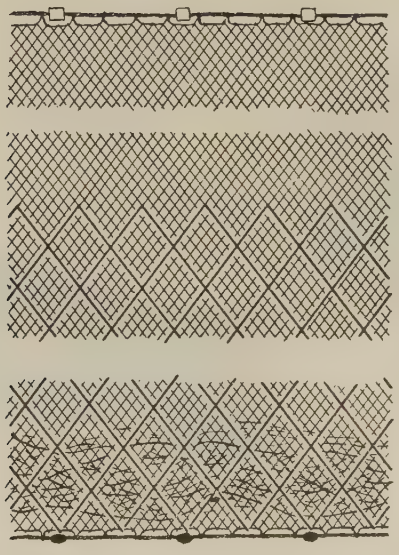
Used essentially in coastal waters, these nets are mounted on stakes driven into the bottom. The fish are collected at low tide.

7.5 Trammel Nets



These bottom-set nets are made with three walls of netting, the two outer walls being of a larger meshsize than the loosely hung inner netting panel. The fish get entangled in the inner small meshed wall after passing through the outer wall.

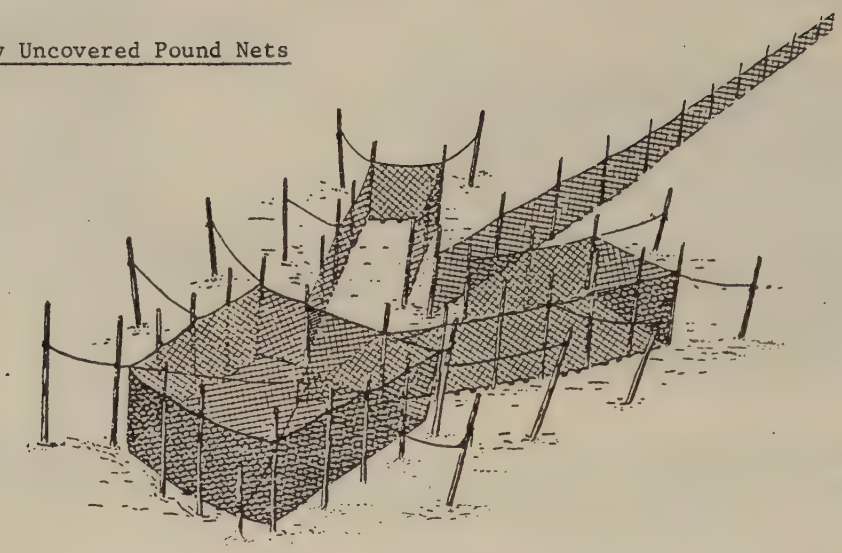
7.6 Combined Gillnets - Trammel Nets



This bottom-set gear is made with a gillnet, the lower part of which is replaced by a trammel net. It may catch bottom fish in the lower trammel net part, together with semi-demersal or pelagic fish in the upper gillnet part.

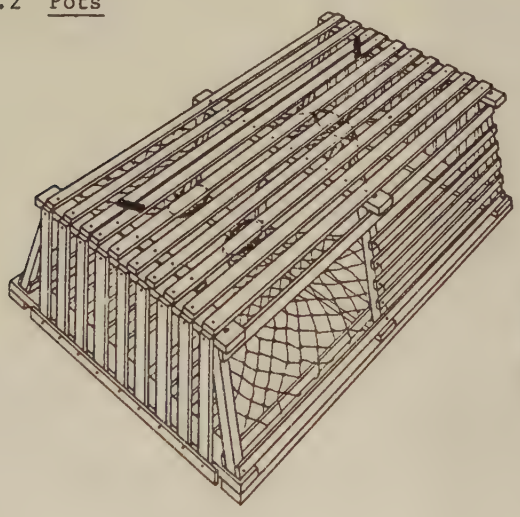
8. TRAPS

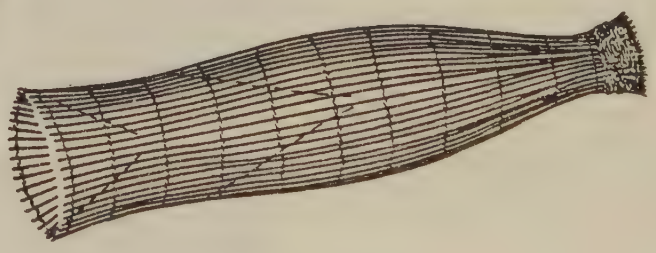
8.1 Stationary Uncovered Pound Nets



These are usually large nets, anchored or fixed on stakes, open at the surface and provided with various types of fish herding and retaining devices. They are mostly divided into chambers closed at the bottom by netting. In Japan this group is usually referred to as 'set-nets' (not to be confused with the fixed gillnets referred to above).

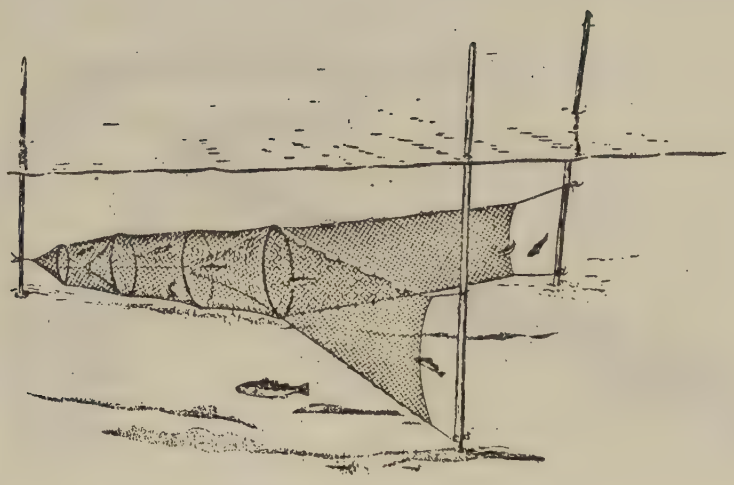
8.2 Pots





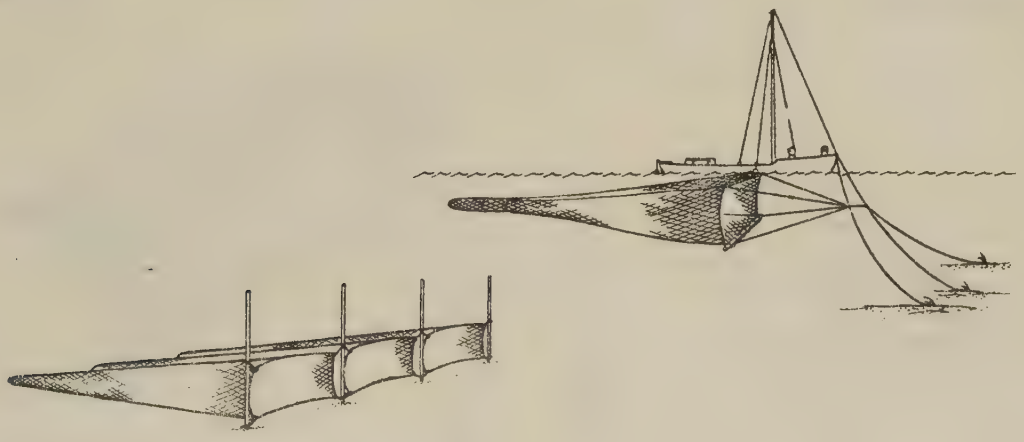
These traps, designed to catch fish or crustaceans, are in the form of cages or baskets made with various materials (wood, wicker, metal rods, wire netting, etc.) and have one or more openings or entrances. They are usually set on the bottom, with or without bait, singly or in rows, connected by ropes (buoy-lines) to buoys showing their position on the surface.

8.3 Fyke Nets



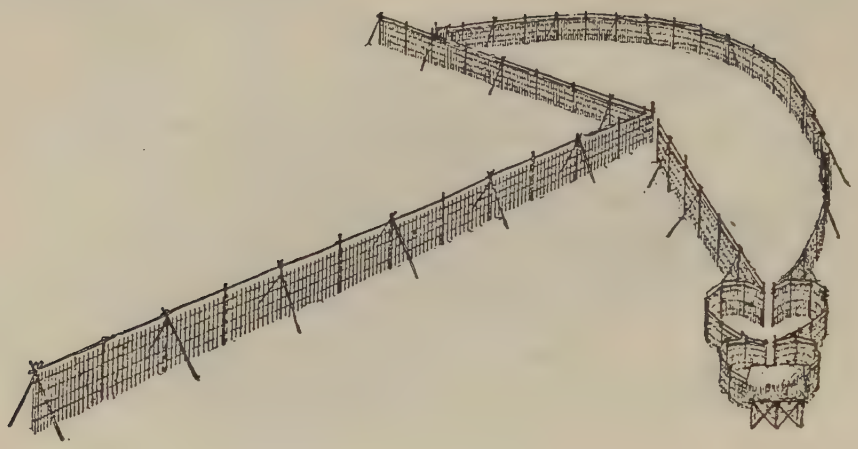
Normally used in shallow water, these traps consist of cylindrical or cone-shaped bags mounted on rings or other rigid structures, completely covered by netting and completed by wings or leaders which drive the fish towards the opening of the bags. The fyke nets, fixed on the bottom by anchors, ballast or stakes, may be used separately or in groups.

8.4 Stow Nets



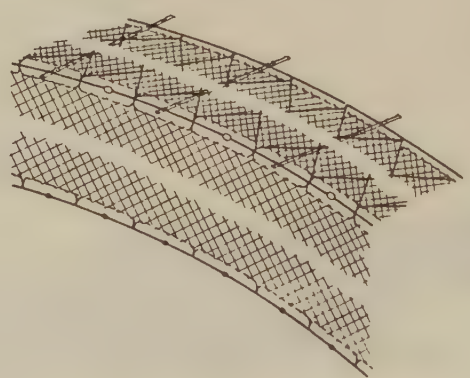
This gear can be used only in rivers, estuaries or areas with strong currents. Usually in the form of a cone or pyramid, these nets are fixed by means of anchors or stakes, placed according to the direction and strength of the current. The mouths are usually held open by a frame, which may or may not be supported by a boat.

8.5 Barriers, Fences, Weirs, Corrals, etc.



Gear of this type, made of various materials (stakes, branches, reeds, netting, etc.), are usually constructed in tidal waters. They differ from the fixed gillnets (see 7.4) which, when the tide ebbs, may eventually allow the fish not entangled or gilled to pass freely underneath their bottom line.

8.6 Aerial Traps



Jumping fish (e.g., mullets) and gliding fish (flying fish) can be caught on the surface in boxes, rafts, boats and nets ('veranda nets'). The fish are sometimes frightened to get them to jump out of the water.

9. HOOKS AND LINES

The fish are attracted by a natural or artificial bait (lures) placed on a hook fixed to the end of a line or snood, on which they get caught.

Hooks or metallic points (jigs) are also used to catch fish by ripping them when they pass near. This is in particular the case with the jigging lines for squids which are

provided with artificial lures with multiple hooks and where the line is given a jerky up-and-down movement which attracts and catches the squid.

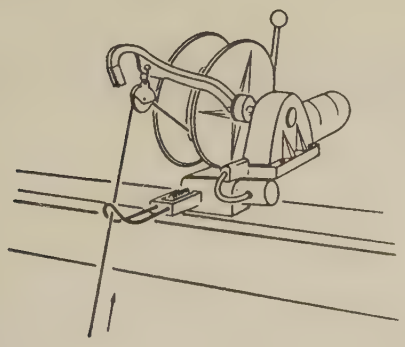
Hook-and-line units may be used singly or in large numbers.

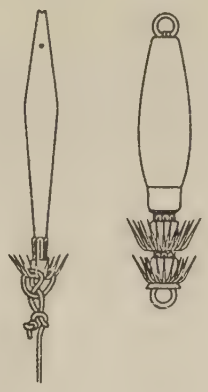
9.1 Handlines and Pole-Lines (Hand Operated)

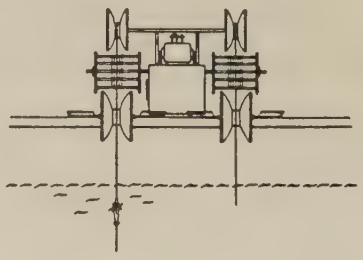
Handlines may be used with or without a pole or rod. For fishing in deep waters the lines are usually operated using reels. The bait used may be natural or artificial.

This category includes the jigging lines, operated by hand and used generally on small boats.

9.2 Handlines and Pole-Lines (Mechanized)



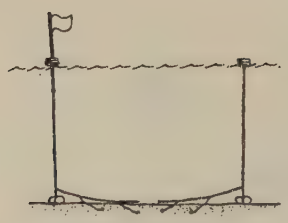


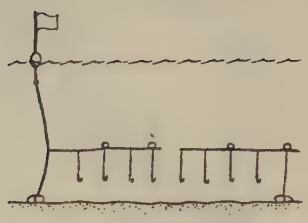


Handlines can be worked mechanically, using powered reels or drums. They are generally used on medium size vessels, but they may also be used on relatively small boats.

Pole-lines can also be mechanized, e.g., for tuna catching, with the pole movement being entirely automatic.

9.3 Set Longlines





This category comprises bottom longlines, baited or unbaited, which are placed on or near the bottom. Bottom longlines consist of a main line, sometimes of considerable length, to which snoods are fixed at regular intervals, more or less close together.

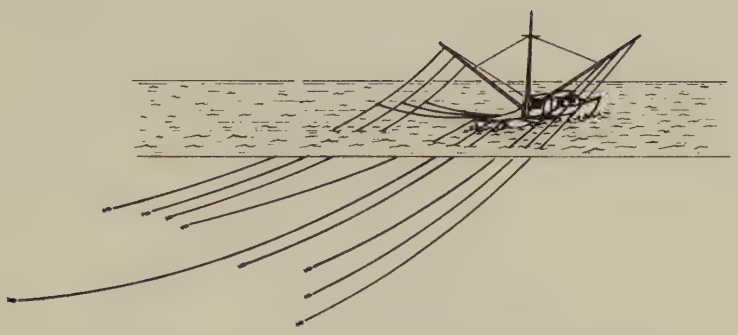
9.4 Drifting Longlines

These lines are kept on the surface or at a certain depth by means of regularly spaced floats. Drifting longlines may be of considerable length, but the snoods are usually longer and more widely spaced than for the bottom longlines.

Some drifting longlines are set vertically, each line hanging from a float at the surface. They are usually worked in groups of several lines operated by a single boat.

9.5 Longlines (Not Specified)

9.6 Trolling Lines



These are simple lines, provided with natural or artificial bait and trailed near the surface or at a certain depth by a vessel. Several lines are usually towed at the same time, with the help of outriggers.

10. GRAPPLING AND WOUNDING

This is a gear for killing, wounding or grappling fish or molluscs. It includes harpoons, spears, arrows, prongs, tongs, clamps, etc.

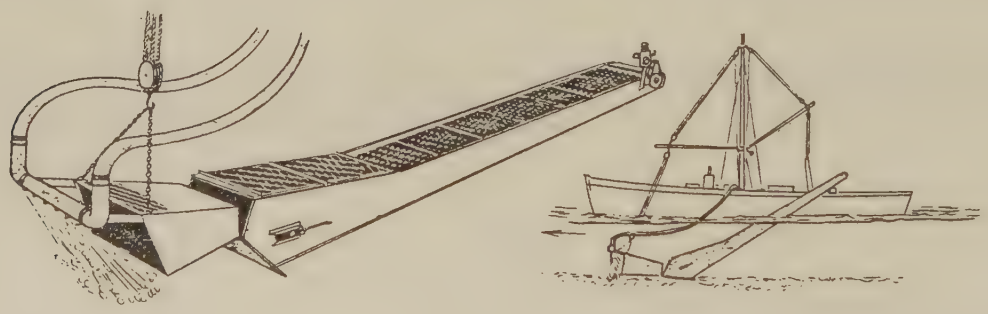
11. HARVESTING GEAR

These are relatively new and highly efficient types of gear used to extract fish from the water by direct pumping or forced sifting. Their use is, however, limited to a small number of species.

11.1 Pumps

These pumps serve to catch fish, usually attracted by light; they should not be confused with the pumps used to transfer fish already caught.

11.2 Mechanized Dredges



This gear digs molluscs out of the bottom by means of powerful underwater jets. The molluscs collected are sometimes transferred into the boat carrying the dredge by a conveyor-belt type device or by suction.

.....

20. MISCELLANEOUS

This heading covers a great variety of other fishing gear and methods, not specified elsewhere or based on mixed principles. The following are examples:

- scoop nets and landing nets (with fixed or variable opening, operated in shallow waters or from boats);

- drive-in-nets (not specified elsewhere);

- gathering by hand or with simple hand implements (with or without diving equipment);

- poisons and explosives (prohibited in general);

- trained animals;

- electrical fishing.

APPENDIX 1

International Standard Statistical Classification of Fishing Gear (ISSCFG)
(29 July 1980)

Gear Categories	Standard Abbreviation	ISSCFG Code
SURROUNDING NETS		01.0.0
With purse lines (purse seines)	PS	01.1.0
- one boat operated purse seines	PS1	01.1.1
- two boats operated purse seines	PS2	01.1.2
Without purse lines (lampara)	LA	01.2.0
SEINE NETS		02.0.0
Beach seines	SB	02.1.0
- boat or vessel seines	SV	02.2.0
- Danish seines	SDN	02.2.1
- Scottish seines	SSC	02.2.2
- pair seines	SPR	02.2.3
Seine nets (not specified)	SX	02.9.0
TRAWLS		03.0.0
Bottom trawls		03.1.0
- beam trawls	TBB	03.1.1
- otter trawls[1/]	OTB	03.1.2
- pair trawls	PTB	03.1.3
- nephrops trawls	TBN	03.1.4
- shrimp trawls	TBS	03.1.5
- bottom trawls (not specified)	TB	03.1.9
Midwater trawls		03.2.0
- otter trawls[1/]	OTM	03.2.1
- pair trawls	PTM	03.2.2
- shrimp trawls	TMS	03.2.3
- midwater trawls (not specified)	TM	03.2.9
Otter twin trawls	OTT	03.3.0
- trawls (not specified)	OT	03.4.9
Pair trawls (not specified)	PT	03.5.9
Other trawls (not specified)	TX	03.9.0
DREDGES		04.0.0
Boat dredges	DRB	04.1.0
Hand dredges	DRH	04.2.0
LIFT NETS		05.0.0
Portable lift nets	LNP	05.1.0
Boat-operated lift nets	LNB	05.2.0
Shore-operated stationary lift nets	LNS	05.3.0
Lift nets (not specified)	LN	05.9.0

1/ Fisheries agencies may indicate side and stern bottom and side and stern midwater trawls, as OTB-1 and OTB-2, and OTM-1 and OTM-2, respectively

APPENDIX 1 (cont'd)

Gear Categories	Standard Abbreviation	ISSCFG Code
FALLING GEAR		06.0.0
Cast nets	FCN	06.1.0
Falling gear (not specified)	FG	06.9.0
GILLNETS AND ENTANGLING NETS		07.0.0
Set gillnets (anchored)	GNS	07.1.0
Driftnets	GND	07.2.0
Encircling gillnets	GNC	07.3.0
Fixed gillnets (on stakes)	GNF	07.4.0
Trammel nets	GTR	07.5.0
Combined gillnets-trammel nets	GTN	07.6.0
Gillnets and entangling nets (not specified)	GEN	07.9.0
Gillnets (not specified)	GN	07.9.1
TRAPS		08.0.0
Stationary uncovered pound nets	FPN	08.1.0
Pots	FPO	08.2.0
Fyke nets	FYK	08.3.0
Stow nets	FSN	08.4.0
Barriers, fences, weirs, etc.	FWR	08.5.0
Aerial traps	FAR	08.6.0
Traps (not specified)	FIX	08.9.0
HOOKS AND LINES		09.0.0
Handlines and pole-lines (hand operated) 1/	LHP	09.1.0
Handlines and pole-lines (mechanized) 1/	LHM	09.2.0
Set longlines	LLS	09.3.0
Drifting longlines	LLD	09.4.0
Longlines (not specified)	LL	09.5.0
Trolling lines	LTL	09.6.0
Hooks and lines (not specified) 2/	LX	09.9.0
GRAPPLING AND WOUNDING		10.0.0
Harpoons	HAR	10.1.0
HARVESTING MACHINES		11.0.0
Pumps	HMP	11.1.0
Mechanized dredges	HMD	11.2.0
Harvesting machines (not specified)	HMX	11.9.0

1/ Including jigging lines

2/ Code LDV for dory-operated line gears will be maintained for historical data purposes

APPENDIX 1 (cont'd)

Gear Categories	Standard Abbreviations	ISSCFG Code
MISCELLANEOUS GEAR[1/]	MIS	20.0.0
RECREATIONAL FISHING GEAR	RG	25.0.0
GEAR NOT KNOWN OR NOT SPECIFIED	NK	99.0.0

1/ This item includes: hand and landing nets, drive-in-nets, gathering by hand with simple hand implements with or without diving equipment, poisons and explosives, trained animals, electrical fishing

APPENDIX 2

Examples of Drawings of Fishing Gear[1/]

1/ Extracted from FAO Catalogue of Small-Scale Fishing Gear, 1975

SURROUNDING NET
Purse seine
Sardine
California, U.S.A.

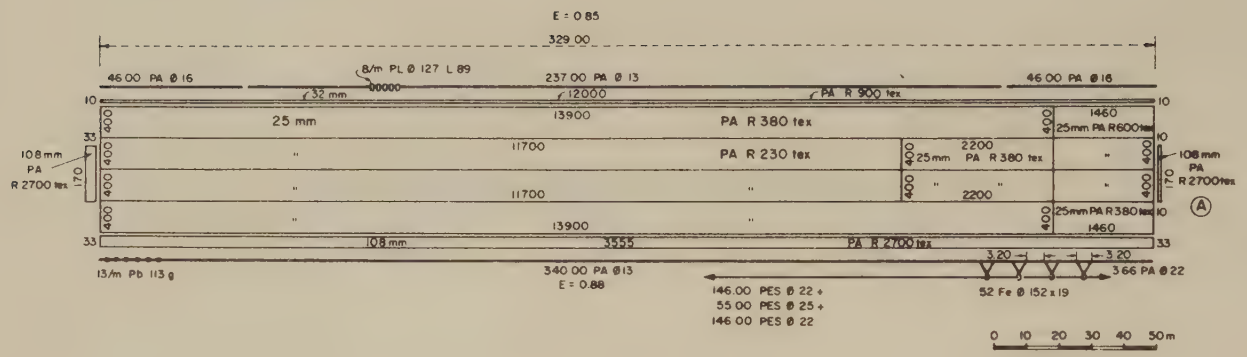
FILET TOURNANT
Senne coulissante
Sardine
Californie, E.U.

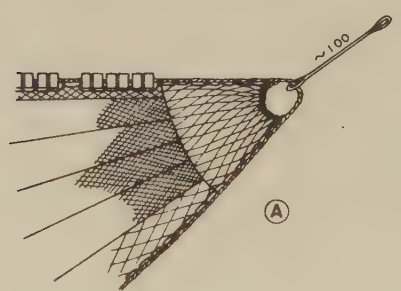
RED DE CERCO
Red de cerco de jareta
Sardina
California, EE.UU.

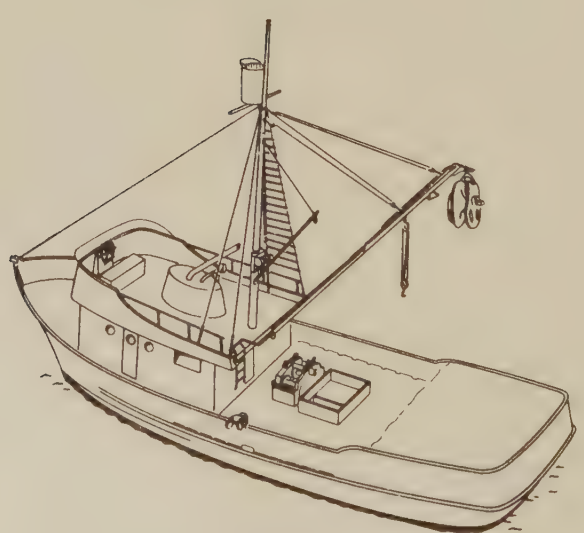
REFERENCE
Borti Petrich
U.S. Net and Twine Co.
1596 Judson Avenue
Long Beach, Calif. 90810
U.S.A.

VESSEL BATEAU BARCO

Loa	Lht	Et	15 m
GT	TJB	TB	-
hp	ch	cv	150







1.1 One boat operated purse seine

SEINE NET

Beach seine, without bag
Sardinella, pelagic and bottom fishes
Senegal

SENNE

Senne de plage, sans poche
Sardinelle, poissons pélagiques et démersaux
Sénégal

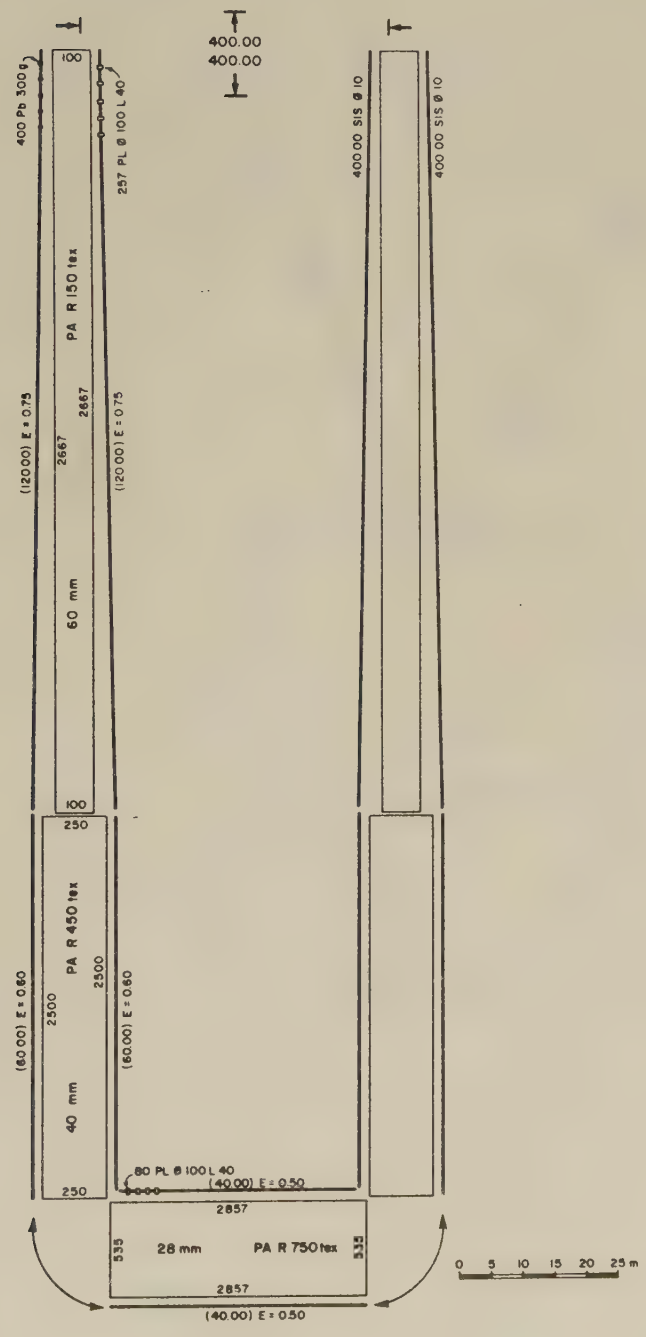
RED DE TIRO

Arte de playa, sin saco
Alacha, peces pelágicos y de fondo
Senegal

REFERENCE

P.A. Seck
c/o Direction de l'Océanographie et des Pêches
Dakar, Sénégal

VESSEL	BATEAU	BARCO	
Loa	Lht	Et	12-14 m
GT	TJB	TB	-
hp	ch	cv	-



2.1 Beach seine

SEINE NET
Bottom seine
Haddock, whiting, cod
Scotland
I. Anchor seining
II. Fly dragging

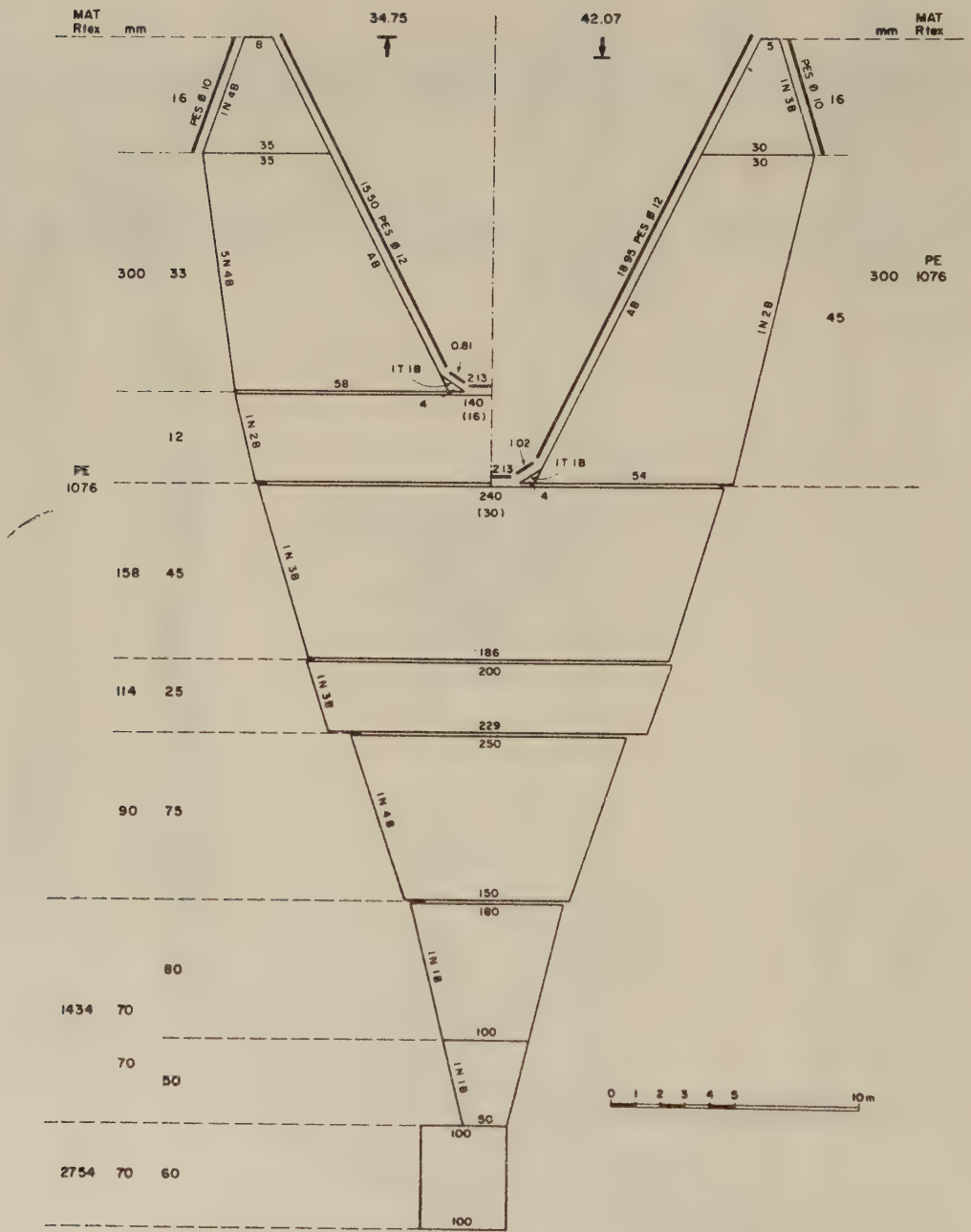
SENNE
Senne de fond
Eglefin, merlan, morue
Ecosse
I. Pêche à l'ancre
II. Pêche en route

RED DE TIRO
Chinchorro fondero
Eglefino, merlán, bacalao
Escocia
I. Pesca con ancla
II. Pesca en marcha

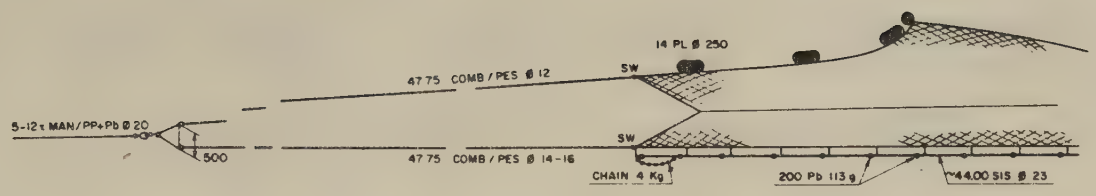
REFERENCE
W. Stewart
13 Dumbar Street
Lossiemouth, Morayshire
Scotland

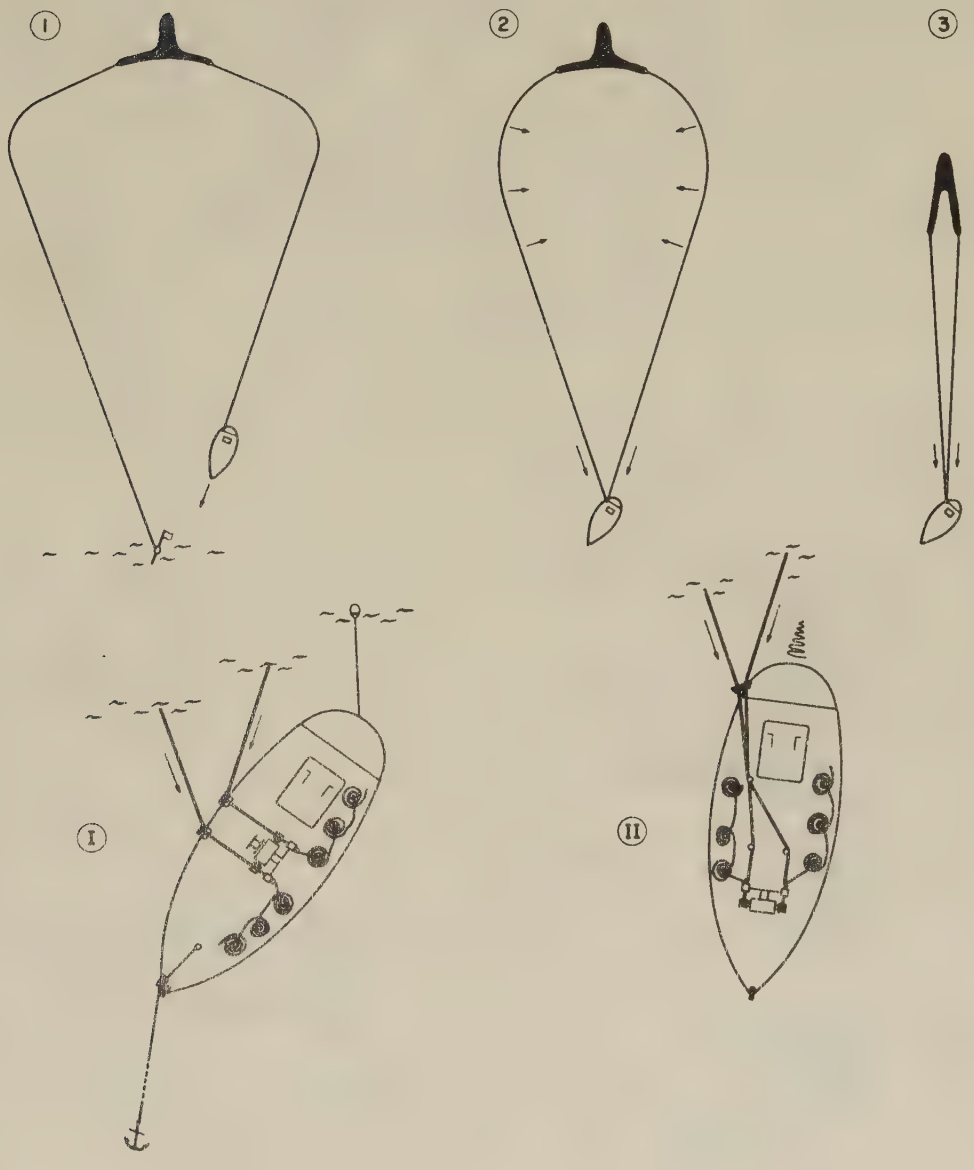
VESSEL BATEAU BARCO

Loa	Lht	Et	13-15 m
GT	TJB	TB	20-40
hp	ch	cv	110-150



2.2 Boat seine (Scottish seine) (1)





2.2 Boat seine (Scottish seine) (2)

TRAWL
Bottom, beam
Flatfish
United Kingdom

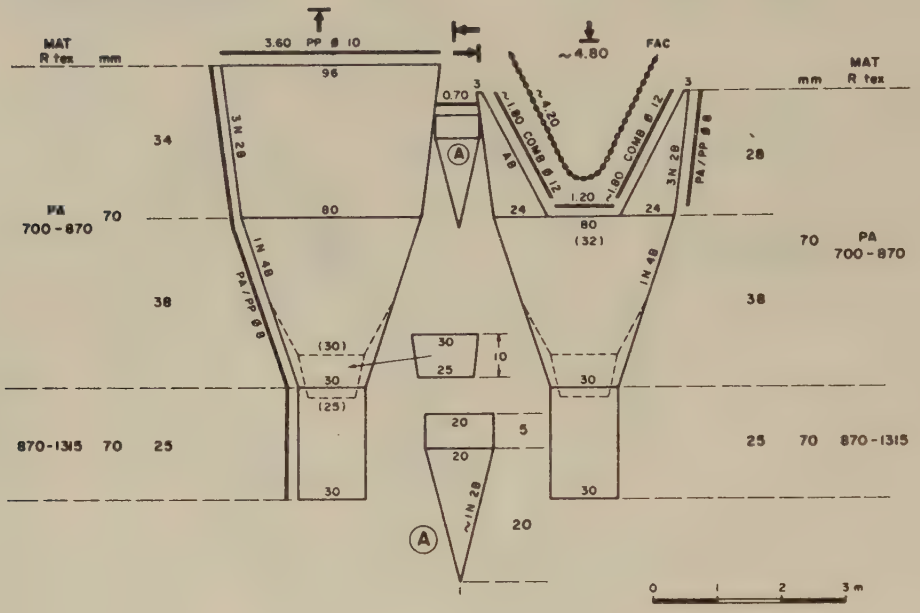
CHALUT
De fond, à perche
Poissons plats
Royaume-Uni

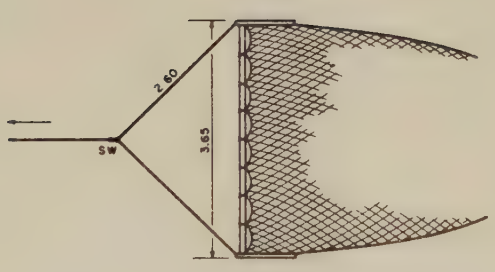
RED DE ARRASTRE
De fondo, de vara
Peces planos
Reino Unido

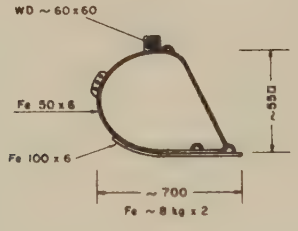
REFERENCE
H. Buckingham
(by courtesy: World Fishing, February/March 1973)

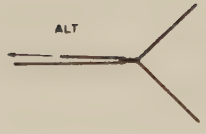
VESSEL BATEAU BARCO

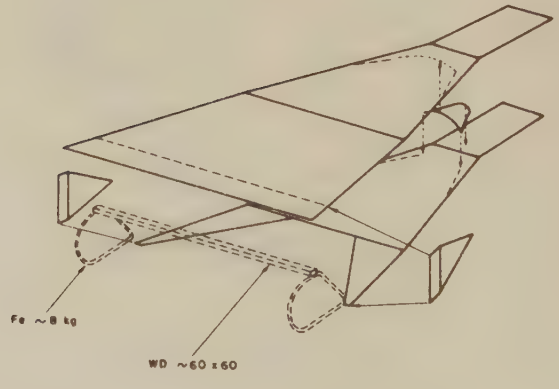
Loa	Lht	Et	10-12 m
GT	TJB	TB	-
hp	ch	cv	20-50











3.1 Bottom trawl (beam trawl)

TRAWL
Bottom, otter
Bottom species
E. English Channel, France

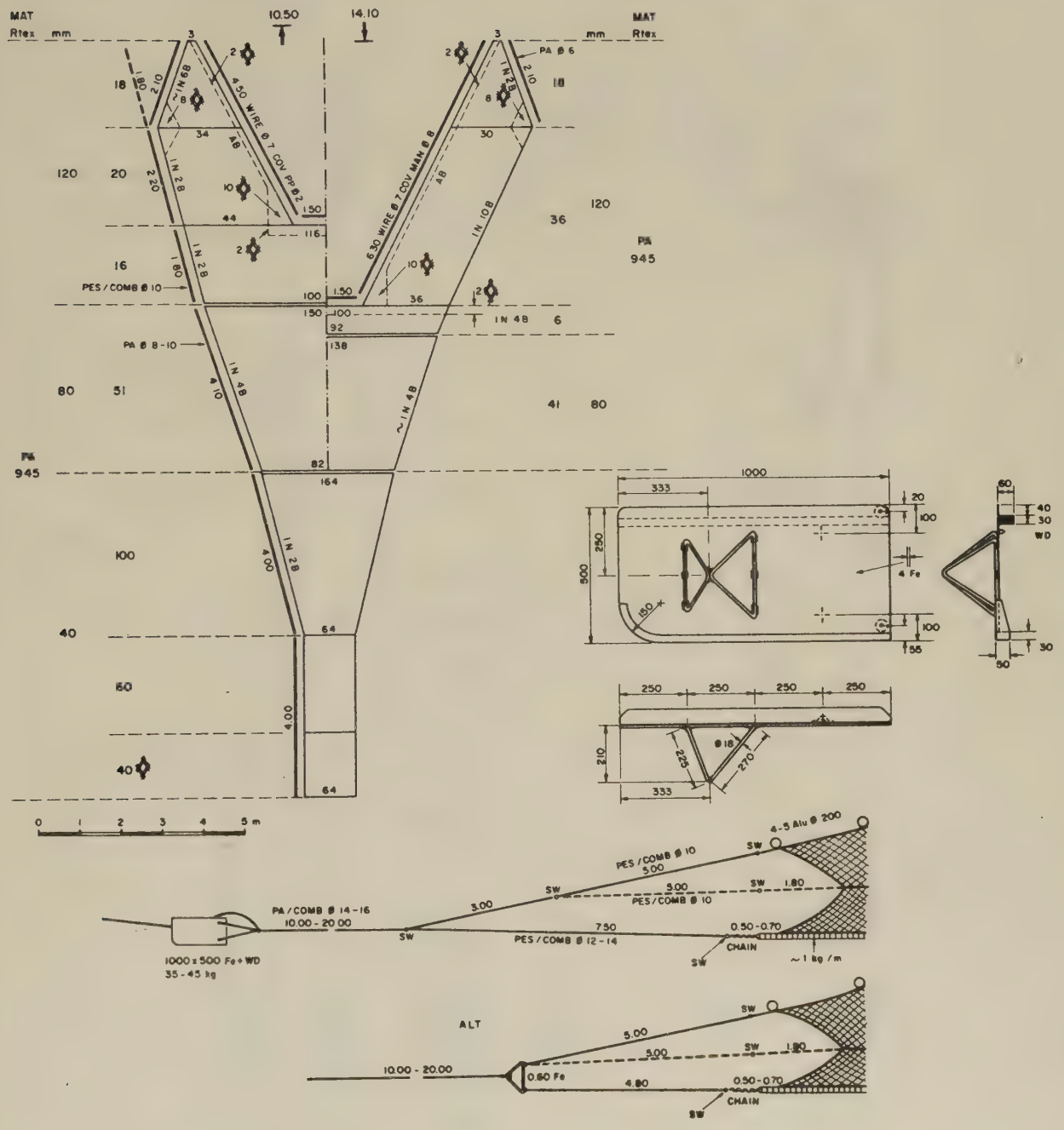
CHALUT
De fond, à panneaux
Espèces de fond
Manche E., France

RED DE ARRASTRE
De fondo, con puertas
Especies de fondo
Canal de la Manche E., Francia

REFERENCE
M. Portier
Institut des Pêches Maritimes
Boulogne-sur-Mer, France

VESSEL BATEAU BARCO

Loa	Lhf	Et	8-10 m
GT	TJB	TB	-
hp	ch	cv	50



3.1 Bottom trawl (otter trawl)

TRAWL

bottom, pair
smooth bottom; E. China Sea
croakers, sharp-toothed eel,
prawn
Japan

CHALUT

de fond, chalut-boeuf
fond doux; Mer de Chine E.
tambours, murène japonaise,
crevette
Japon

RED DE ARRASTRE

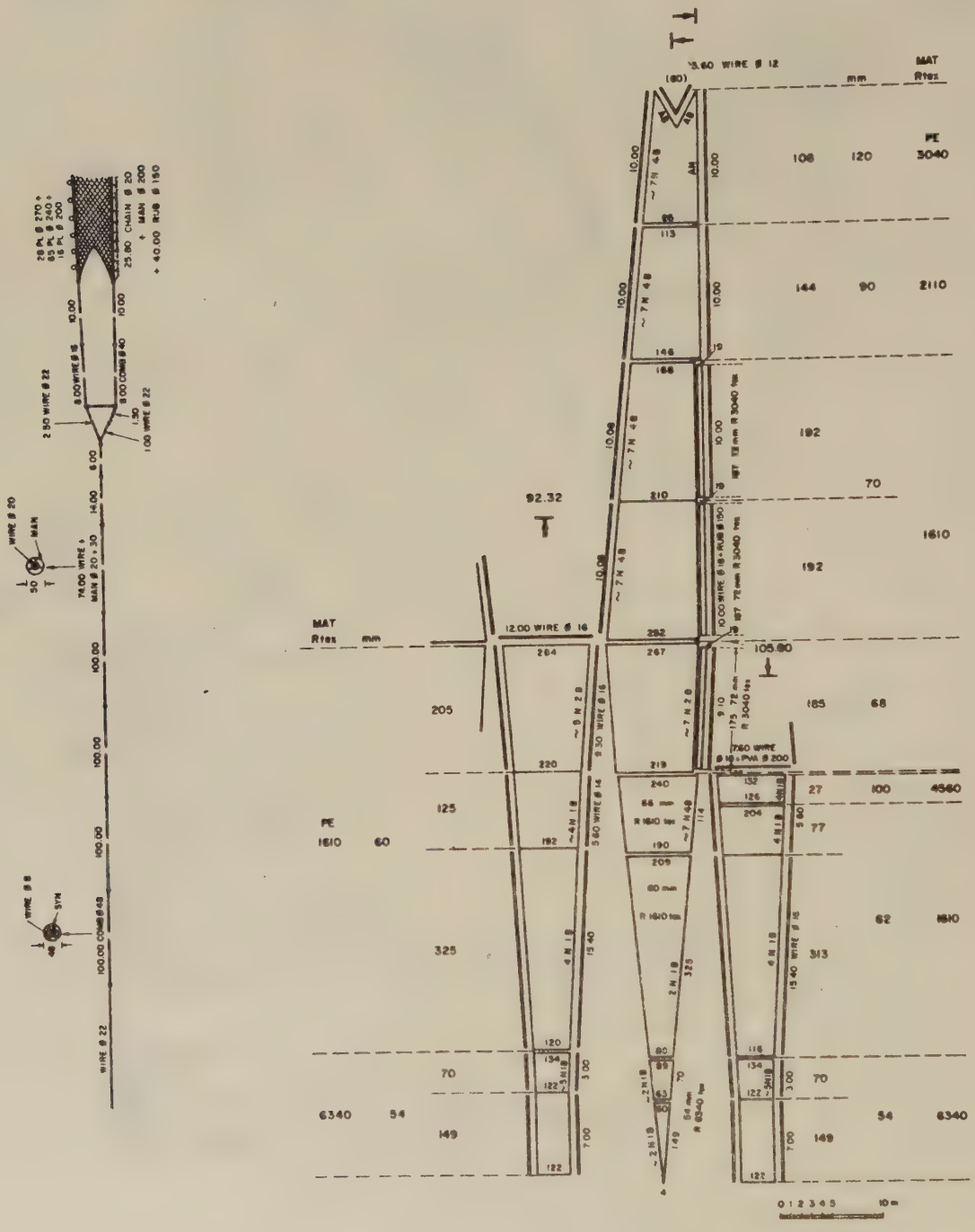
de fondo, pareja
fondo limpio; Mar oriental de la China
corvinas, morena del Japón,
camarón
Japón

REFERENCE

Y. Shimozaki and Y. Osawa
Tokai Regional Fisheries Laboratory
5 Kachidoki, Chuo-ku, Tokyo, Japan

VESSEL BATEAU BARCO X 2

Loo	Lhi	Et	35 m
GT	TJB	TB	130
hp	ch	cv	550



3.1 Bottom trawl (pair trawl)

TRAWL
Midwater, otter
Sprat, anchovy, sardine
S. Brittany, France

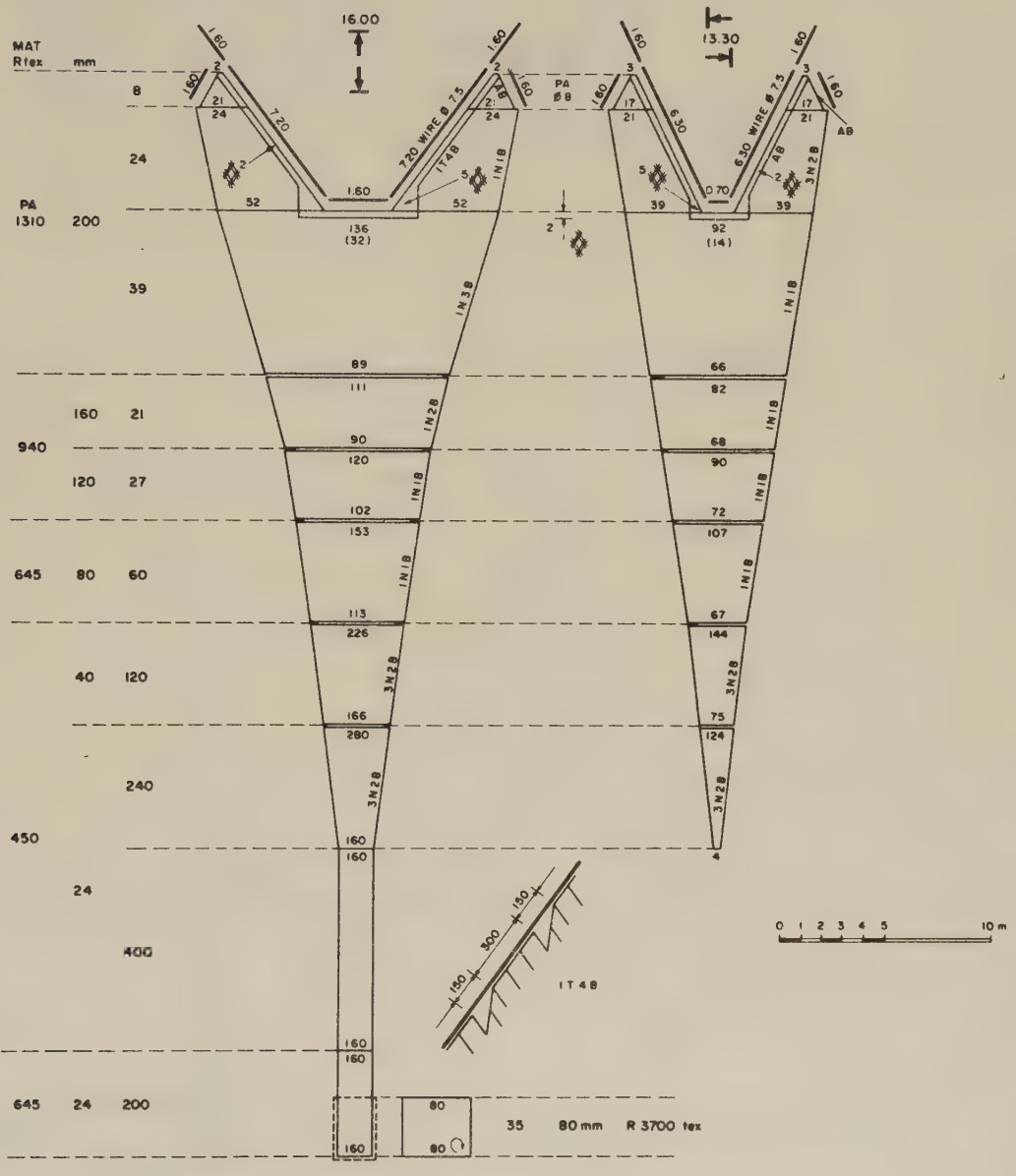
CHALUT
Pélagique, à panneaux
Sprat, anchois, sardine
Bretagne S., France

RED DE ARRASTRE
Pelágica, con puertas
Espadín, anchoa, sardina
Bretaña S., Francia

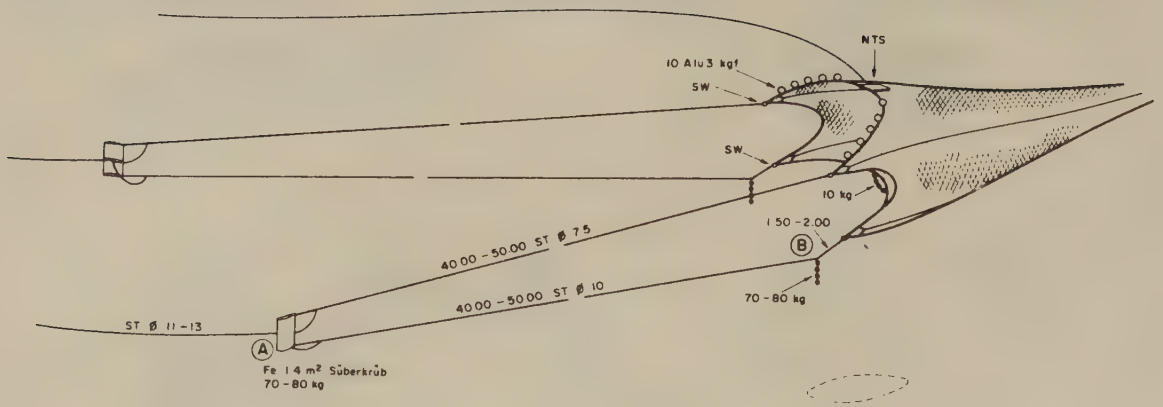
REFERENCE
M. Portier
Institut des Pêches Maritimes
Boulogne-sur-Mer, France

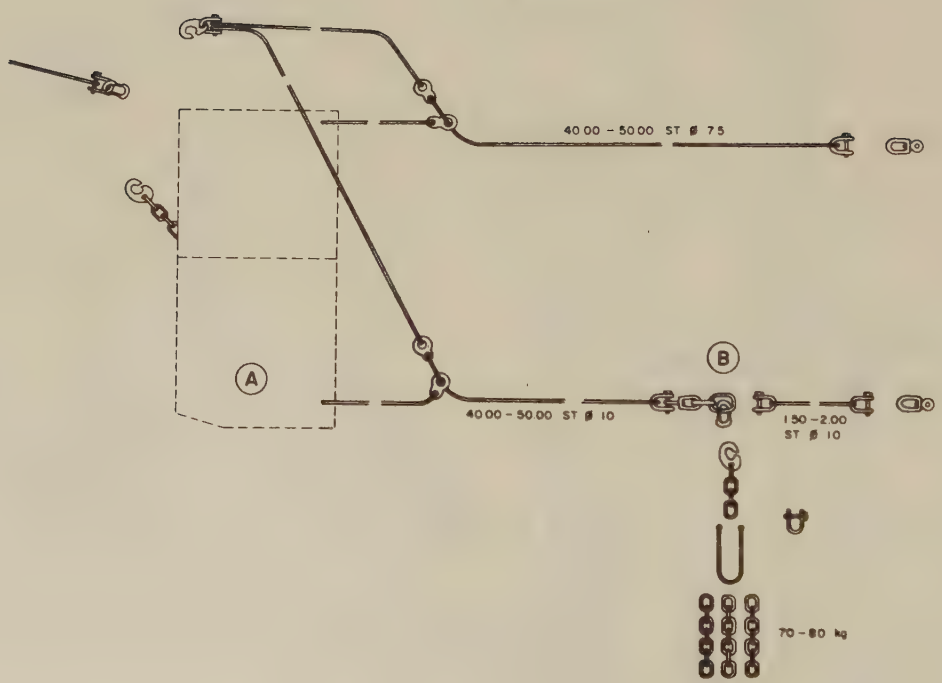
L. Le Pape
Le Croisic, France

VESSEL	BATEAU	BARCO	
Loo	Lht	Et	15 m
GT	TJB	TB	35
hp	ch	cv	150



3.2 Midwater trawl (otter trawl) (1)





3.2 Midwater trawl (otter trawl) (2)

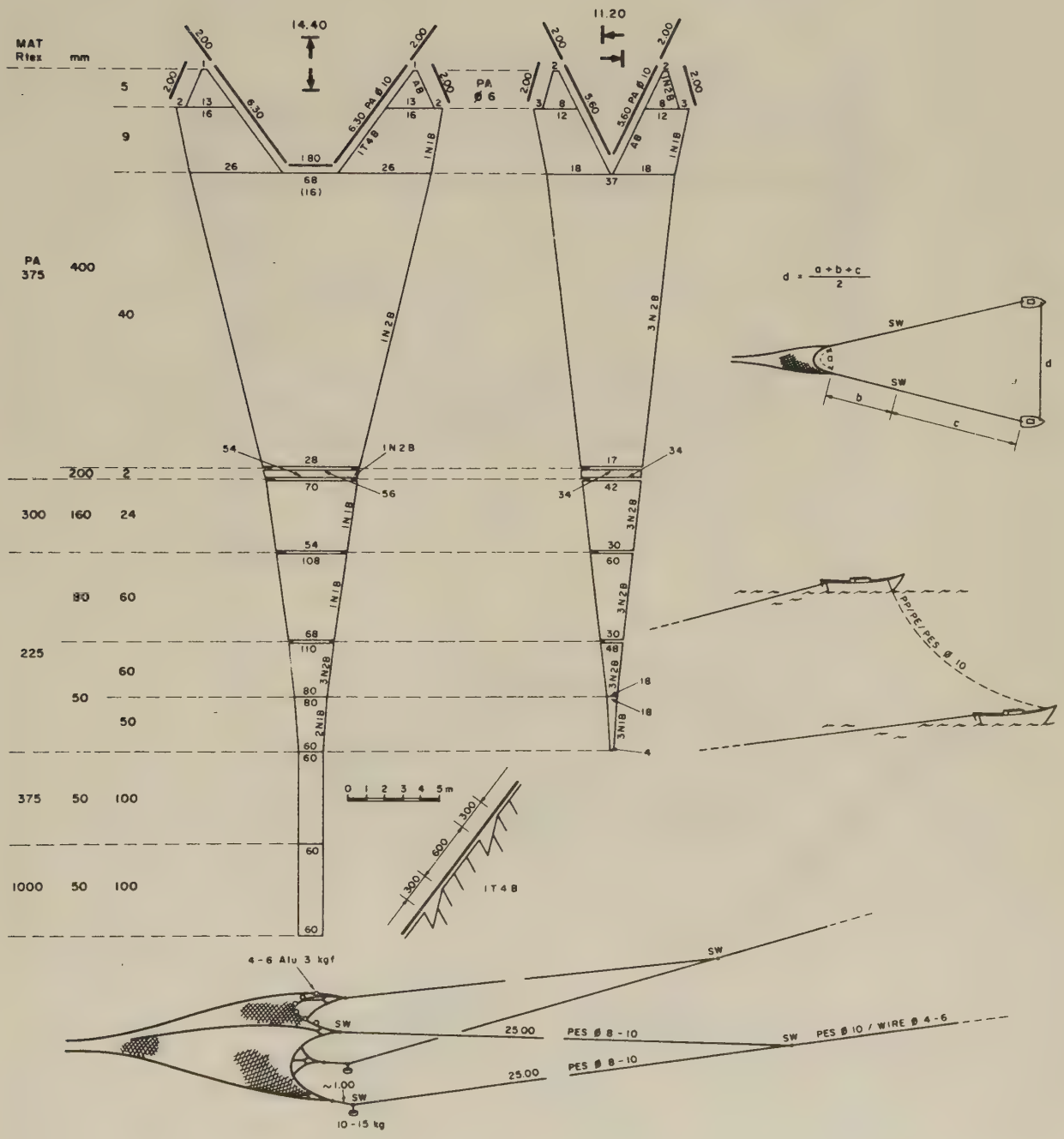
TRAWL
Midwater, pair
Herring, cod, whiting
E. English Channel, France

CHALUT
Pélagique, chalut-boeuf
Hareng, morue, merlan
Manche E., France

RED DE ARRASTRE
Pelágica, con puertas
Arenque, bacalao, merlán
Canal de la Mancha E., Francia

REFERENCE
M. Portier
Institut des Pêches Maritimes
Boulogne-sur-Mer, France

VESSEL	BATEAU	BARCO	x 2
Loa	Lht	Et	6 m
GT	TJB	TB	-
hp	ch	cv	9-15



3.2 Midwater trawl (pair trawl)

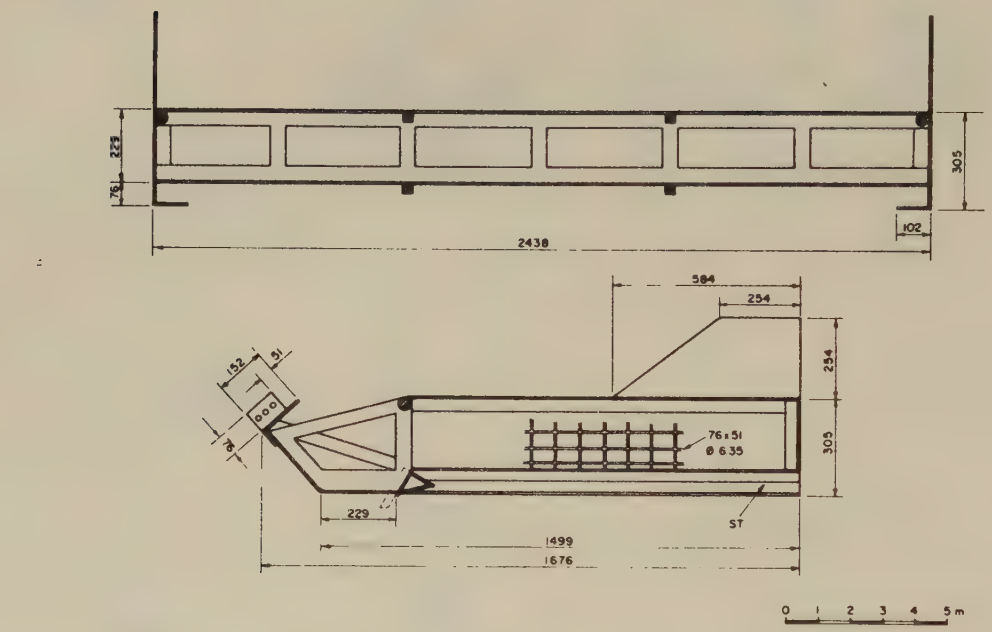
DREDGE
Boat-operated
Scallop
Australia

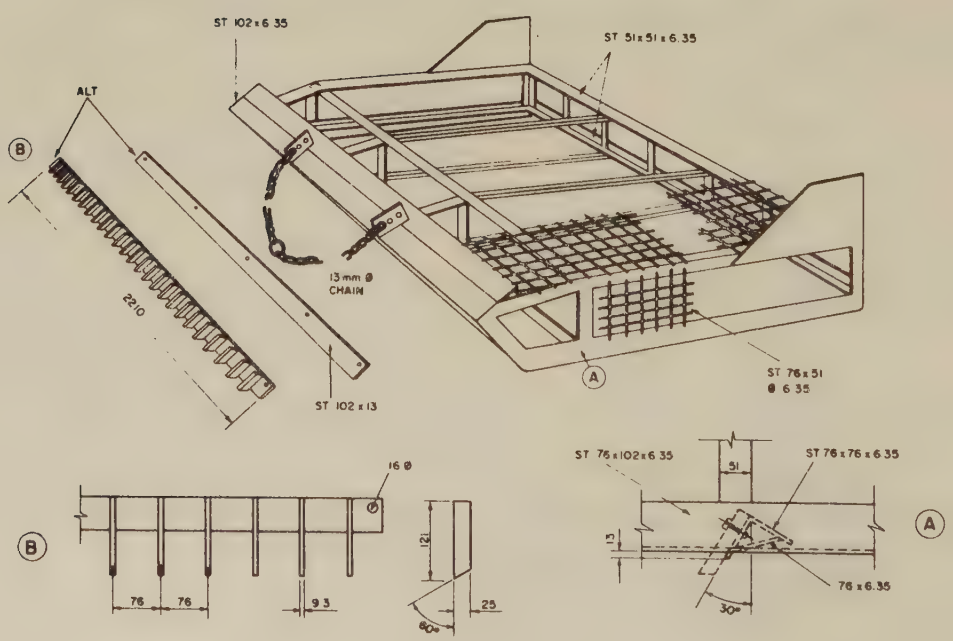
DRAGUE
Manoeuvrée du bateau
Coquille St. Jacques
Australie

RASTRO
Maniobrada desde el barco
Vieiras
Australia

REFERENCE
W.D. Hughes
Fisheries Division, Department of Primary Industry
Canberra, Australia

VESSEL	BATEAU	BARCO	
Loa	Lht	Et	9-15 m
GT	TJB	TB	-
hp	ch	cv	70-150





4.1 Boat dredge

LIFTNET

Boat-operated
Stick-held dipnet (bouke-ami)
For catching live-bait
Pacific, Fiji Islands

FILET SOULEVE

Manoeuvré du bateau
Monté sur bâtons
Pour pêche d'appât vivant
Pacifique, Iles Fidji

RED IZADA

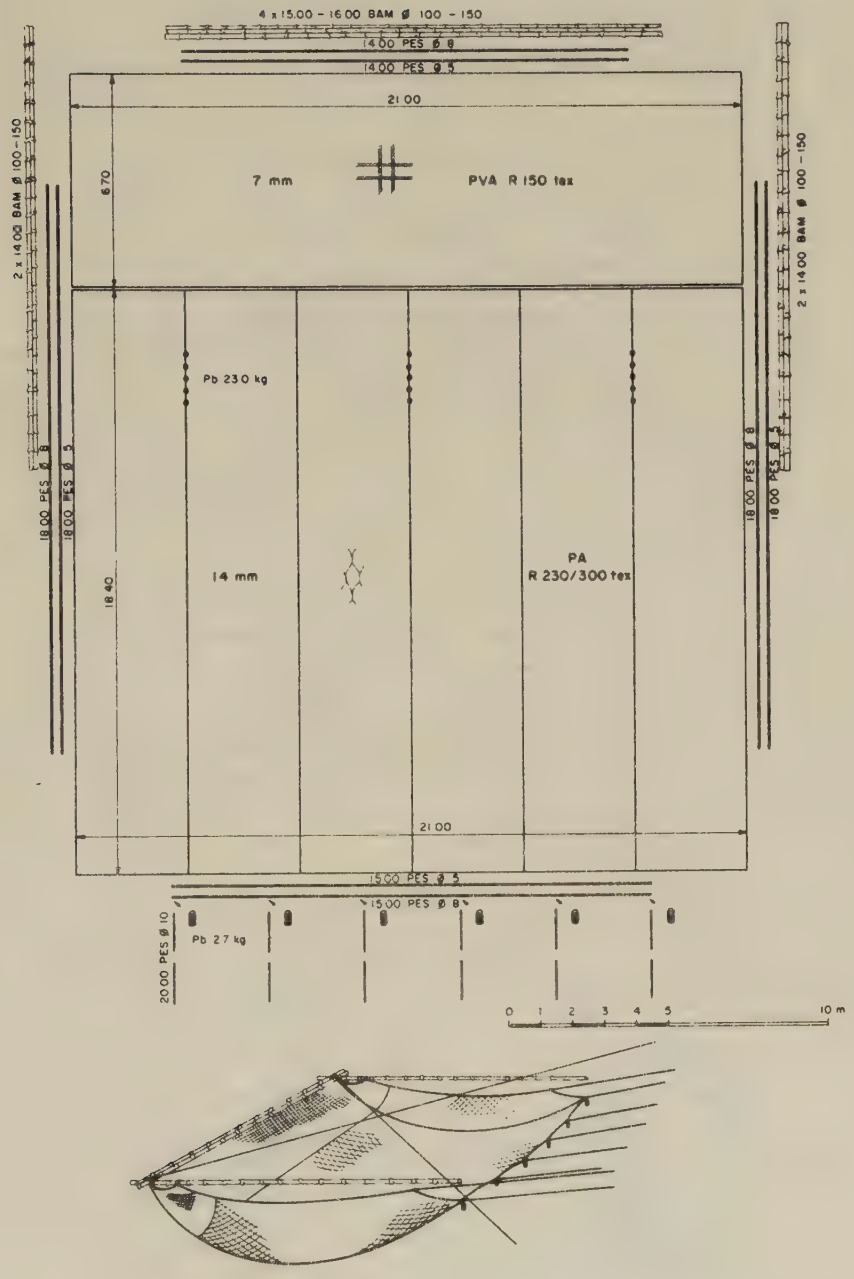
Maniobrada desde el barco
Con varas
Para pescar la carnada viva
Pacífico, Islas Fiji

REFERENCE

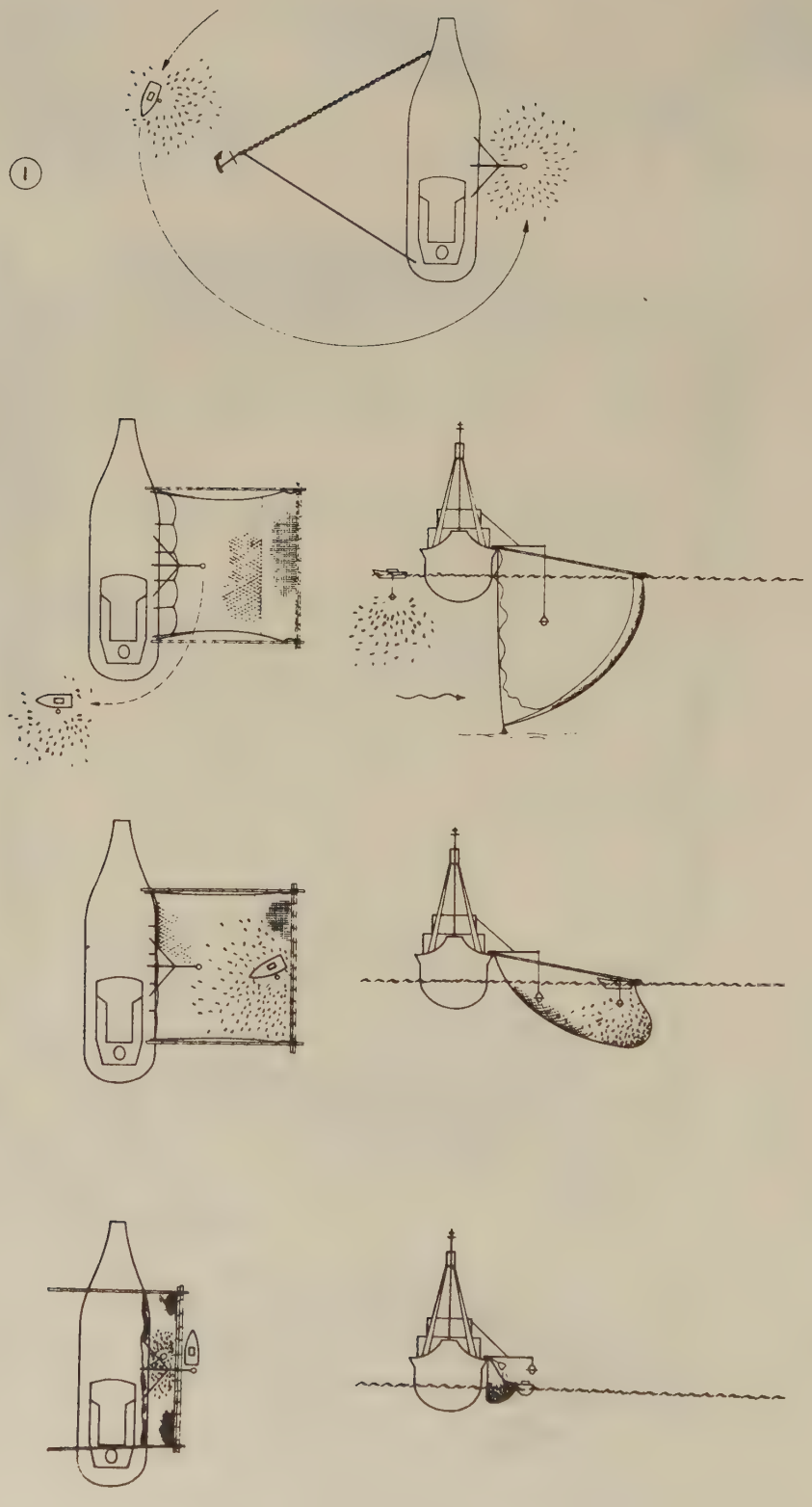
R.M. Stone
Fisheries Division
Lami, Suva, Fiji

R. Lee
FAO

VESSEL	BATEAU	BARCO	
Loa	Lht	Et	15 m
GT	TJB	TB	-
hp	ch	cv	-



5.2 Boat operated lift net (1)



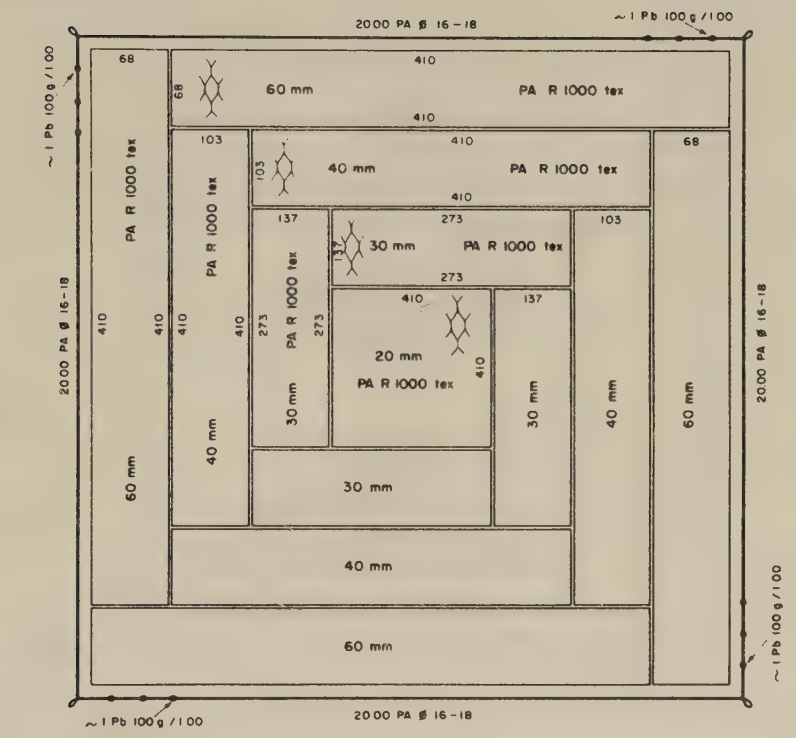
5.2 Boat operated lift net (2)

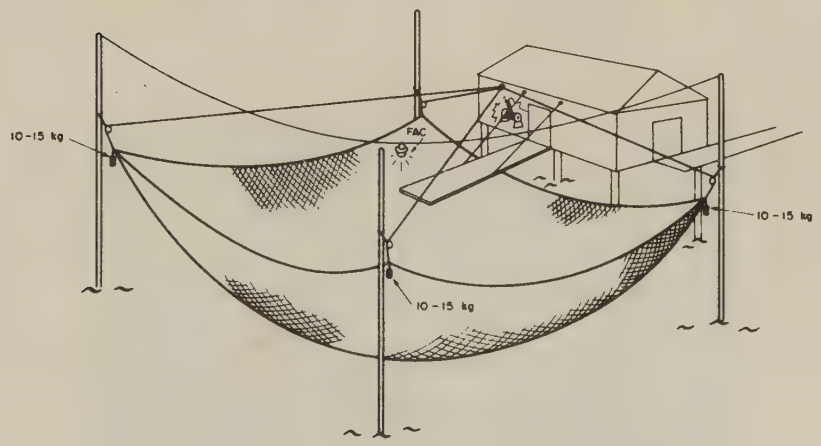
LIFTNET
Shore-operated, stationery
Mullets, clupeids, eel
Adriatic, Italy

FILET SOULEVE
Manoeuvré du rivage, fixe
Mulet, clupéidés, anguille
Adriatique, Italie

RED IZADA
Maniobrada desde la costa, fija
Mujol, clupeidos, anguila
Adriático, Italia

REFERENCE
G. Bombace, B. Galli
Laboratorio de tecnologia della pesca
Ancona, Italy





5.3 Shore operated stationary lift net

CASTNET

Hand
I With pockets
II With closing lines
Mullet, ethmalosa (bonga), misc. species
Rivers, Senegal

EPERVIER

A main
I Avec poches
II Avec fils de fermeture
Mulet, ethmalose, espèces diverses
Fleuves, Sénégal

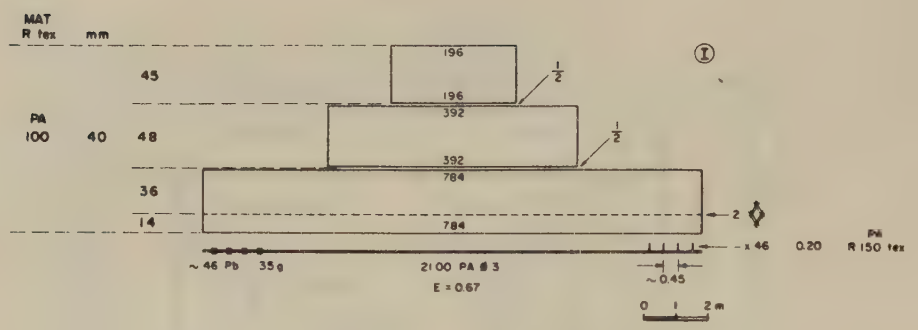
ESPARAVEL

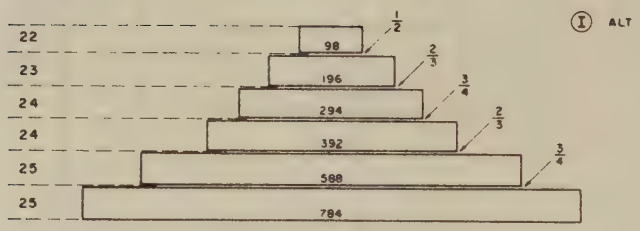
A mano
I Con bolsillos
II Con hilos de cerradura
Mujol, ethmalosa, especies diversas
Ríos, Senegal

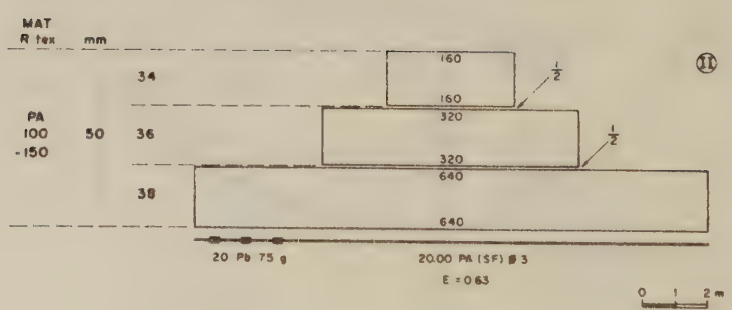
REFERENCE

P. Sack
c/o Direction de l'Océanographie et des Pêches
Dakar, Sénégal

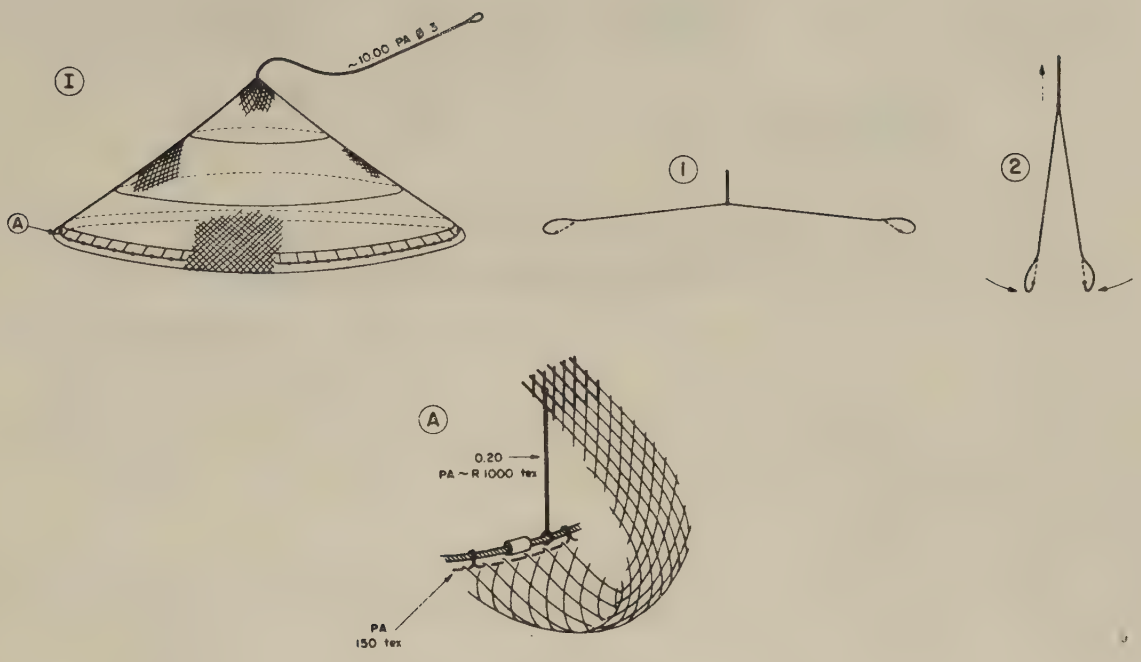
VESSEL	BATEAU	BARCO	PAC
Loa	Lht	Et	4-6 m
GT	TJB	TB	-
hp	ch	cv	-







6.1 Cast net (1)


I
~10.00 PA ø 3
A
1
2
A
0.20
PA ~ R 1000 tex
PA
150 tex
II
~10.00 PA ø 3-5
1.00
1
B
B
~ ø 45 BR (HO)
x 20
PA MONO ø 0.9
2

6.1 Cast net (2)

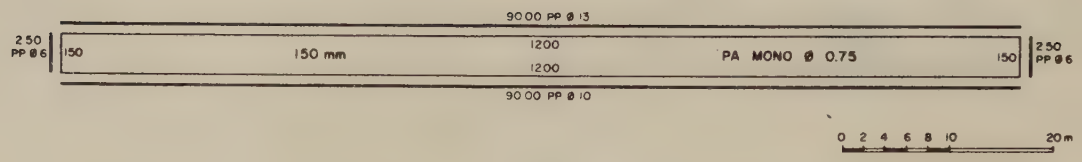
GILLNET
Bottom set
Cod, flounder
Newfoundland, Canada

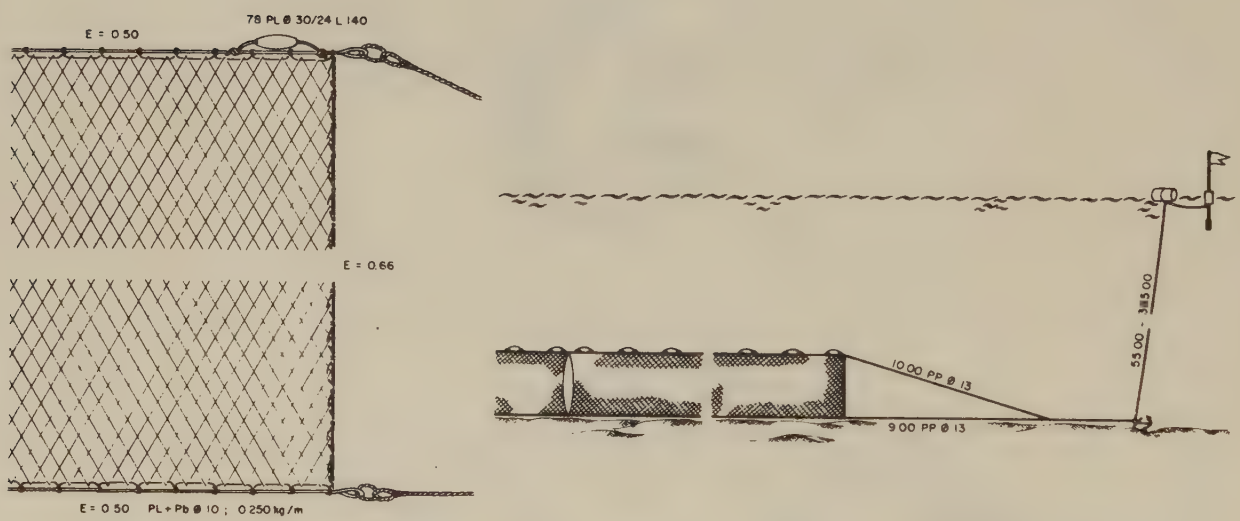
FILET MAILLANT
Calé sur le fond
Morue, poissons plats
Terre-Neuve, Canada

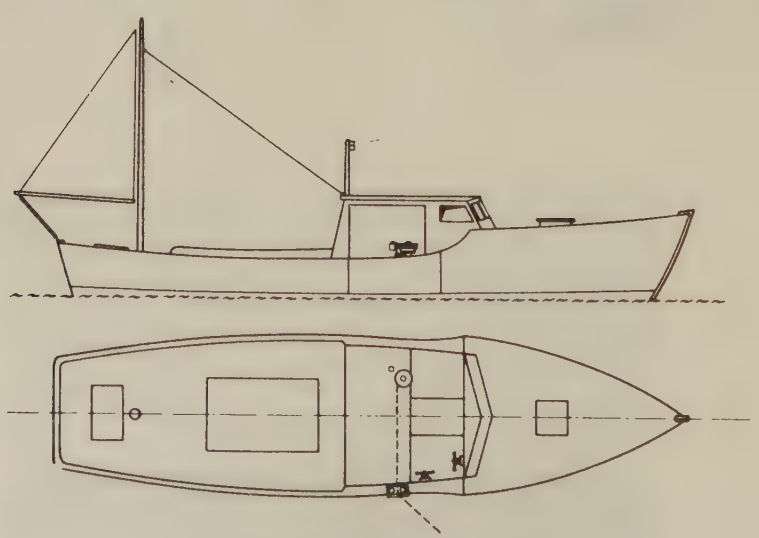
RED DE ENMALLE
De fondo, calada
Bacalao, peces planos
Terranova, Canadá

REFERENCE
A.J. Provan, R.G. Kingsley
College of Fisheries
St. John's, Newfoundland, Canada

VESSEL	BATEAU	BARCO	
Loa	Lht	Et	12-14 m
GT	TJB	TB	15-20
hp	ch	cv	50-100







7.1 Set gillnet (anchored)

GILLNET

Driftnet
Skipjack, yellowfin, bonito, shark
Sri Lanka

FILET MAILLANT

Dérivant
Listao, albacore, bonite, requin
Sri Lanka

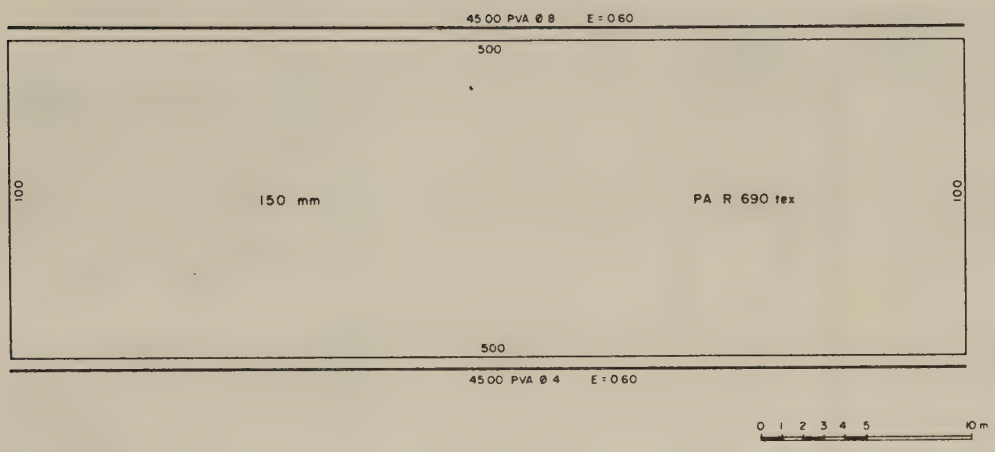
RED DE ENMALLE

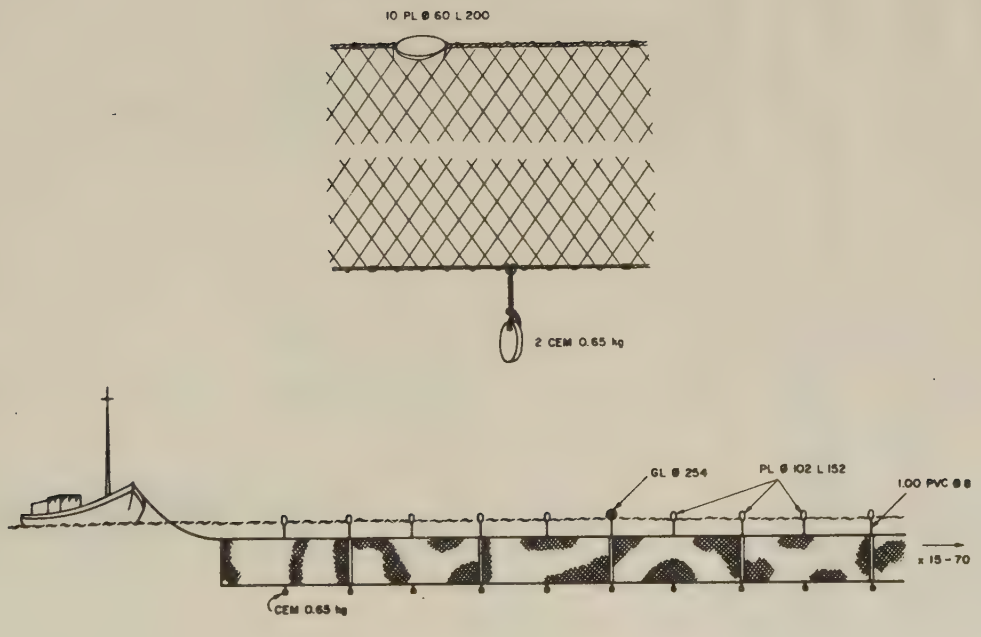
De deriva
Listado, rabil, bonito, tiburón
Sri Lanka

REFERENCE

G. Pajot
FAO

VESSEL	BATEAU	BARCO	
Loa	Lht	Et	-
GT	TJB	TB	3.5-11
hp	ch	cv	15-70





7.2 Drift net

ENTANGLING NET

Trammel, bottom set
Sole
E. English Channel
France

FILET MAILLANT

Trémail, calé sur le fond
Sole
Manche E.
France

RED DE ENMALLE

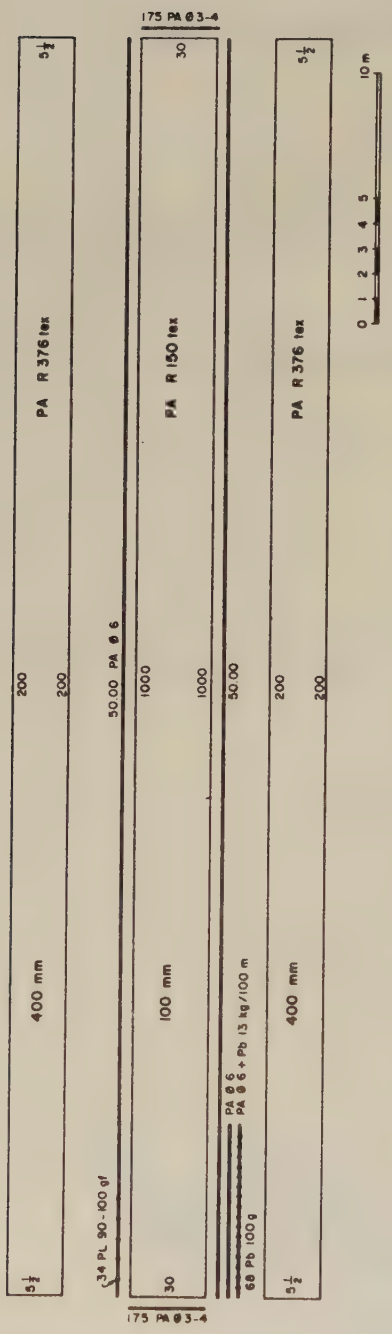
Trasmallo, de fondo, calada
Lenguado
Canal de la Mancha E.
Francia

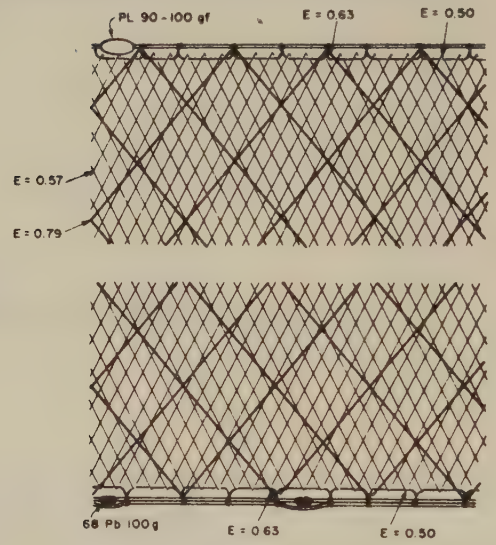
REFERENCE

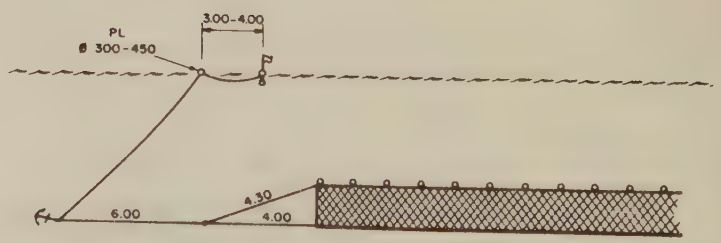
P. Evrard
COPEBO, Boulogne-sur-Mer, France

J.C. Brabant, L. Libert
Institut des Pêches Maritimes
Boulogne-sur-Mer, France

VESSEL	BATEAU	BARCO	
Loa	Lht	Et	7-9 m
GT	TJB	TB	6-8
hp	ch	cv	40-75







7.5 Trammel net

ENTANGLING NET

Combined, trammel-gillnet
Bottom set
Bottom and pelagic fishes
Mediterranean, France

FILET MAILLANT

Combiné, Tremail-filet maillant
Calé sur le fond
Poissons de fond et pélagiques
Méditerranée, France

RED DE ENMALLE

Combinada, trasmallo-red de enmalle
Peces de fondo y pelágicos
Mediterráneo, Francia

REFERENCE

A. Brême
FAO

VESSEL BATEAU BARCO

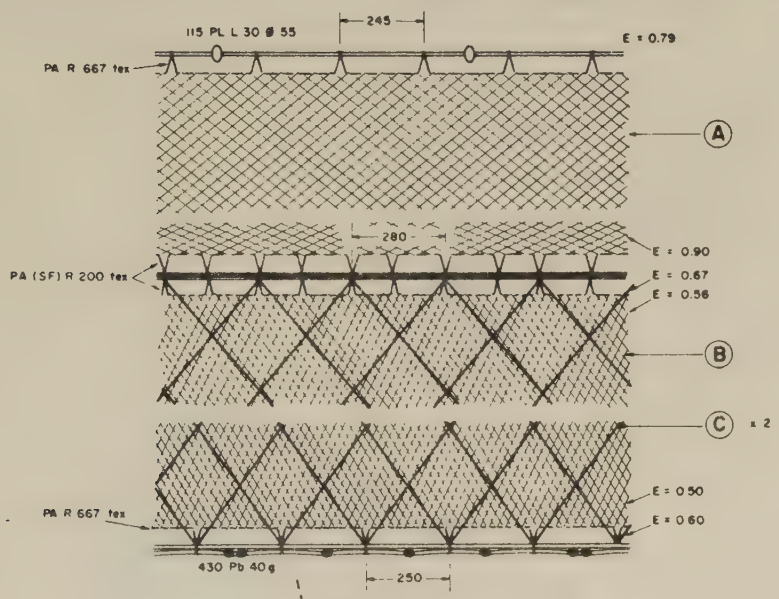
Loa	Lht	Et	6-8 m
GT	TJB	TB	-
hp	ch	cv	20-60

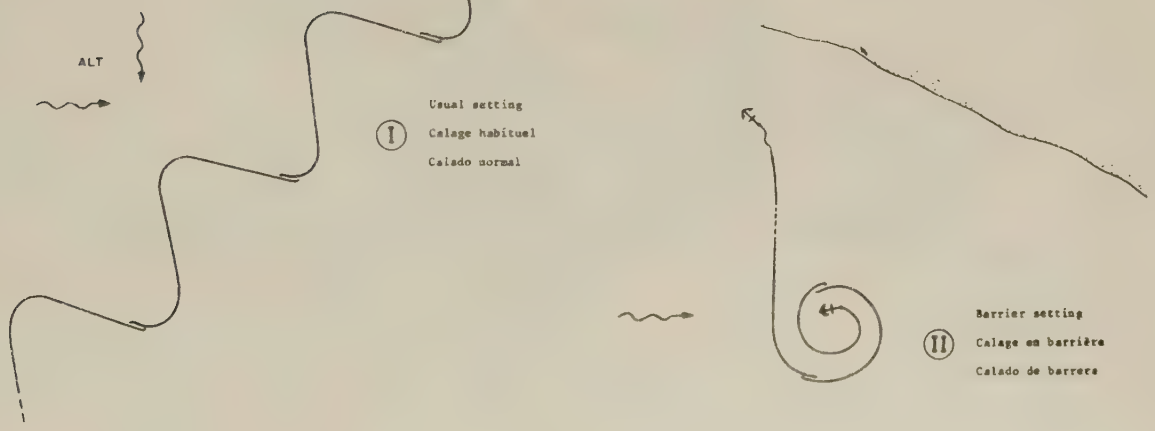
x 8-40
84 25 PA Ø 6

50	62 mm	1720	PA R 100 tex	50 (A)
		2 x 96 32	PA R 1667 tex	
3 ½	420 mm	344	PA R 300 tex	3 ½ (C)
50	50 mm	3440	PA R 100 tex	50 (B)
3 ½	420 mm	344	PA R 300 tex	3 ½ (C)

2 x 86.00 PA (SF) Ø 6

0 1 2 3 4 5 10 m





7.6 Combined gillnet - trammel net

POT

Lobster (creel)
E. Scotland

NASSE

A homard
Ecosse E.

NASA

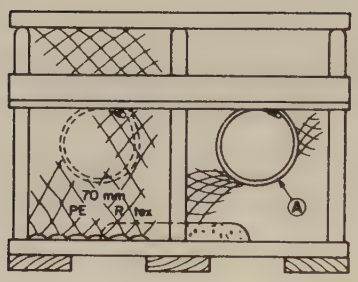
Para bogavante
Escocia E.

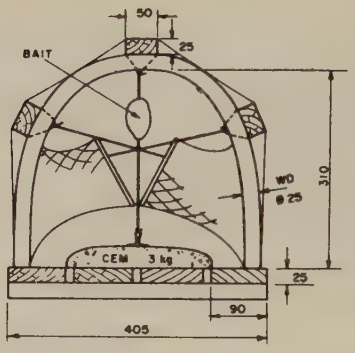
REFERENCE

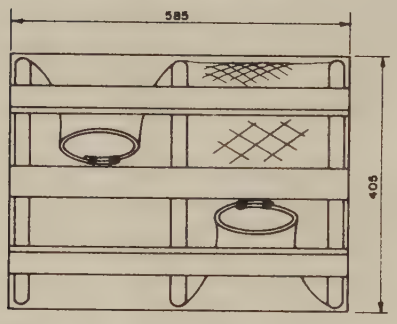
W. Stewart
Lossiemouth, Scotland

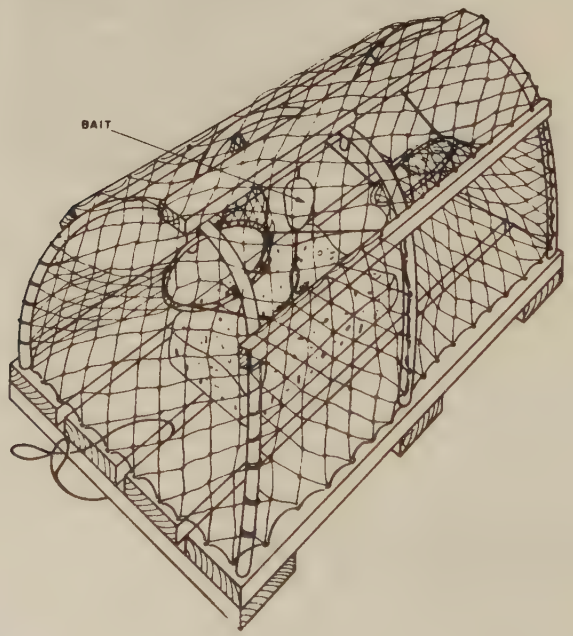
VESSEL BATEAU BARCO

Loa	Lht	Et	9 - 10 m
GT	TJB	TB	-
hp	ch	cv	-









8.2 Pot

LINES

Hand
With electric reel
Cod
Iceland

LIGNES

A main
Avec moulinet électrique
Morue
Islande

LINEAS

De mano
Con carretel eléctrico
Bacalao
Islandia

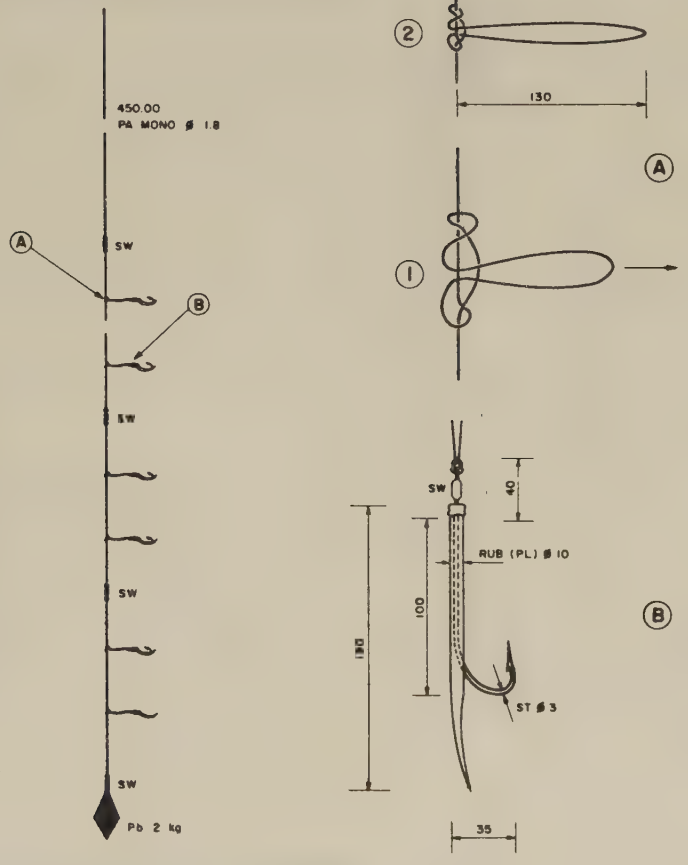
REFERENCE

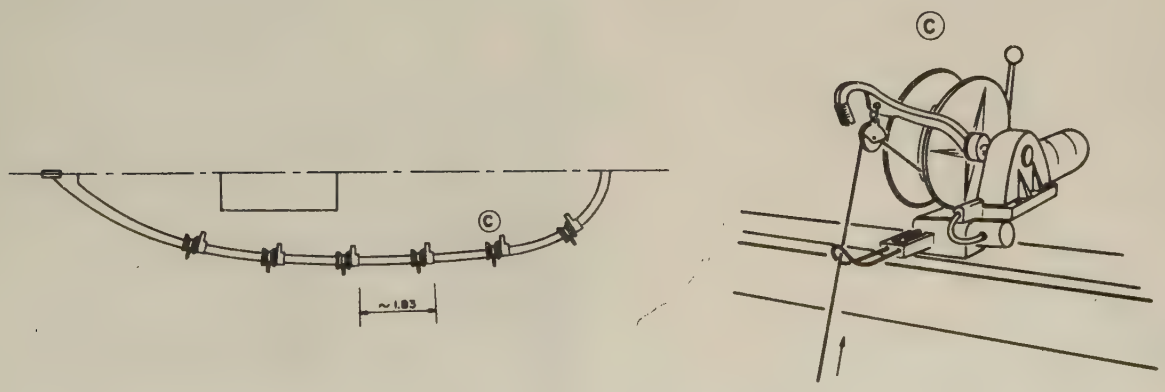
- Gudni Thorsteinsson
  Hafrannsóknastofnunin
  Reykjavik, Iceland
- Elektra Fishing Reel
  Ellidi Norddahl Gudjónsson
  Gardahreppur, Iceland

- G. Jonasson
  FAO

VESSEL BATEAU BARCO

Loa	Lht	Et	10 - 12 m
GT	TJB	TB	-
hp	ch	cv	-





9.2 Mechanized hand-line

LINES
Longline
Bottom set
Sharks
Victoria, Australia

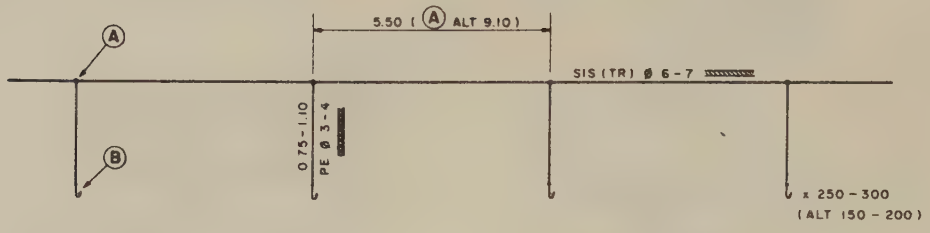
LIGNES
Palangre
De fond
Requins
Victoria, Australie

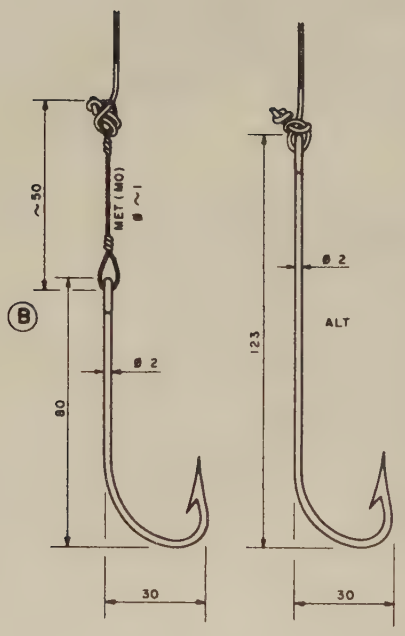
LINEAS
Palangre
De fondo
Tiburones
Victoria, Australia

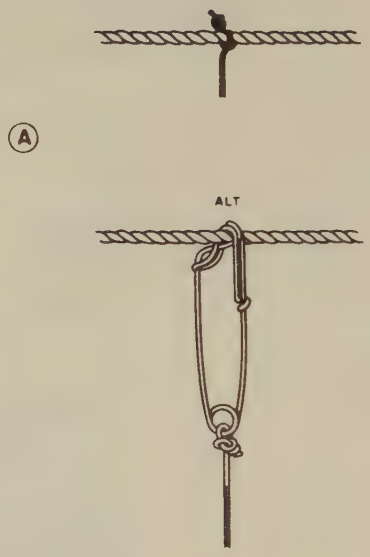
REFERENCE
W.D. Hughes
Fisheries Division, Department of Primary Industry
Canberra, Australia

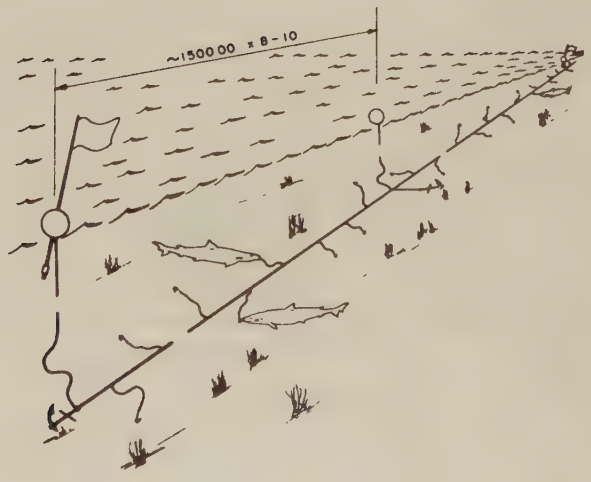
VESSEL BATEAU BARCO

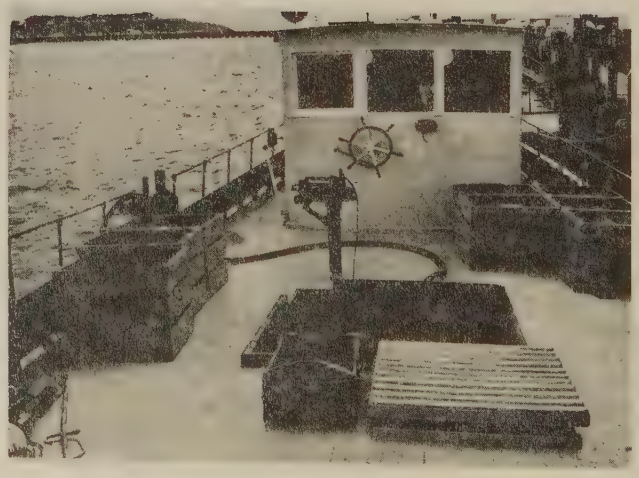
Loa	Lht	Et	12 - 15 m
GT	TJB	TB	-
hp	ch	cv	100 - 150











9.3 Set longline

LINES

Longline
Drifting
Tuna
Taiwan, China

LIGNES

Palangre
Dérivante
Thon
Taïwan, Chine

LINEAS

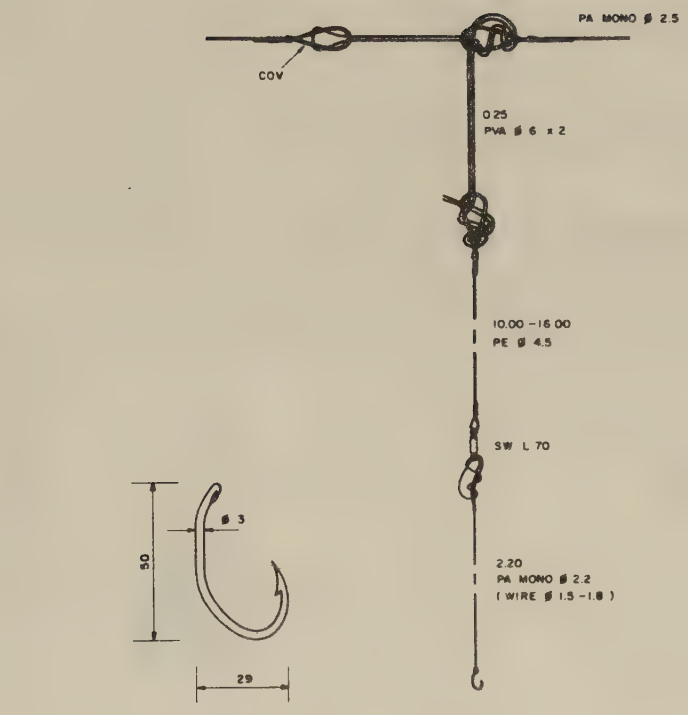
Palangre
De deriva
Atunera
Taiwan, China

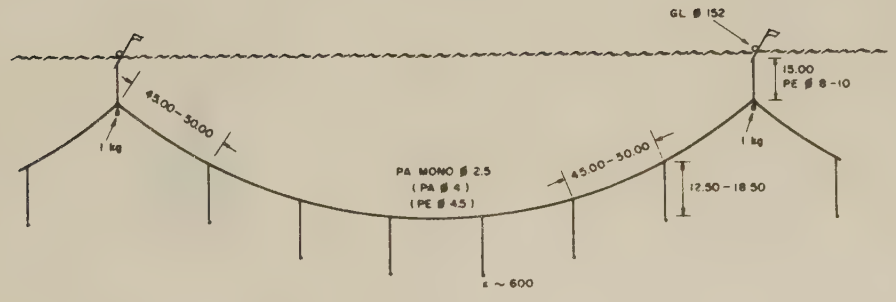
REFERENCE

A.v. Brandt
Hamburg, Fed. Rep. of Germany

VESSEL BATEAU BARCO

Loa	Lht	Et	14 - 15 m
GT	TJB	TB	13 - 20
hp	ch	cv	30 - 60





9.4 Drifting longline

LINES

Trolling
I Surface
II Diving
Albacore
New Zealand

LIGNES

De traîne
I En surface
II Plongeantes
Germon
Nouvelle-Zélande

LINEAS

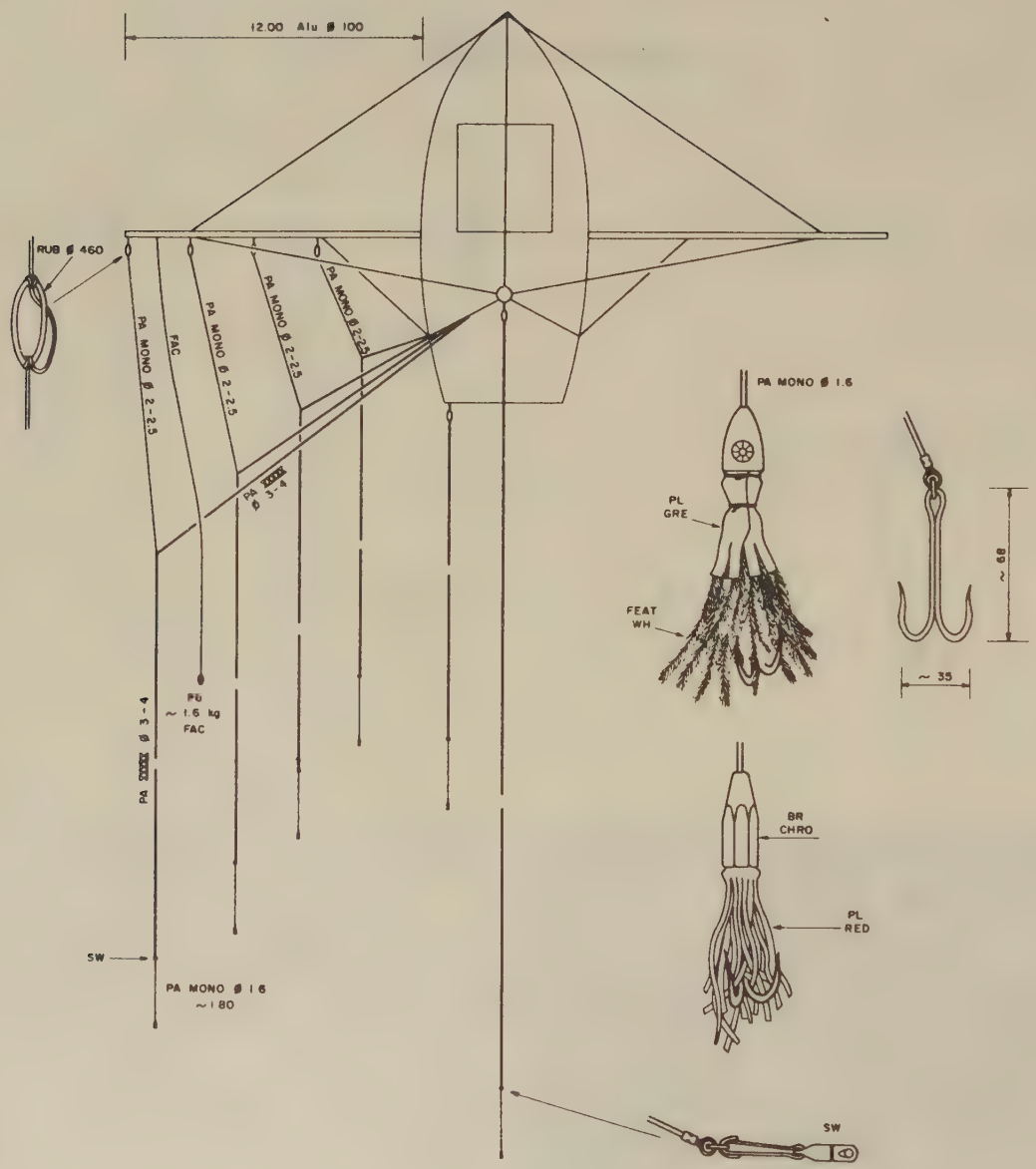
Curricán
I De superficie
II Sumergidas
Albacora
Nueva Zelandia

REFERENCE

I N.F. Parsons
Fishing Industry Board
Wellington, New Zealand

II Loo Chi Hu
Fisheries Research Division
Ministry of Agriculture and Fisheries
Wellington, New Zealand

VESSEL	BATEAU	BARCO	I	II
Loo	Lht	Et	12 - 15 m	6 - 8 m
GT	TJB	TB	-	-
hp	ch	cv	-	-



9.6 Trolling lines

APPENDIX 3

Sources of Illustrations

Brandt, A. von, 1959 Classification of fishing gear. *In* Modern fishing gear of the world, edited by H. Kristjonsson. London, Fishing News (Books) Ltd., for FAO, pp. 274-96

Brandt, A. von, 1966 Fanggeräte der Kutter-und Küstenfischerei. Hamburg, Schriftenreihe des AID

Brandt, A. von, 1972 Fish catching methods of the world. London, Fishing News (Books) Ltd., 240 p. Rev. and enlarged ed.

Nédélec, C. (ed.), 1975 Catalogue of small-scale fishing gear. Catalogue des engins de pêche artisanale. Catálogo de artes de pesca artesanal. West Byfleet, Surrey, Fishing News (Books) Ltd., for FAO, 191 p.

Sundstrom, G.T., 1957 Commercial fishing vessels and gear. Circ.U.S.Fish.Wildl.Serv., (48):48 p.

Umali, A.F., 1950 Guide to the classification of fishing gear in the Philippines. Illustrations by S.G. Duran. Res.Rep.U.S.Fish.Wildl.Serv., (17):165 p.

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